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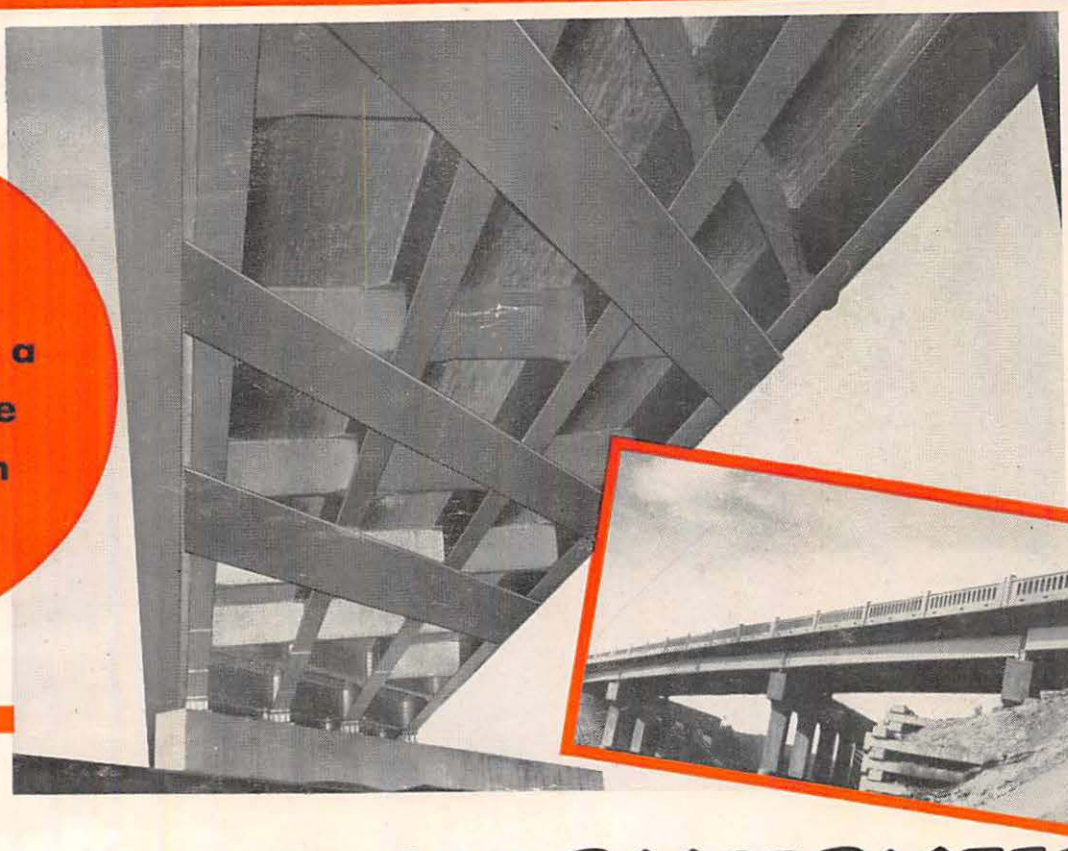
APRIL 6, 1946

Railway Age

Founded in 1856



HOW to overcome a maintenance threat in an overpass

BYERS WROUGHT IRON BLAST PLATES

When this new overpass bridge was recently built at St. Albans, West Virginia, the designers took decisive steps to extend the useful life of the structure. To prevent cinder-laden locomotive blast gases from reducing the strength and section of the bridge members, Byers Wrought Iron Blast Plates were installed.

The conditions encountered by blast plates call for an unusual combination of service qualities, which Byers Wrought Iron possesses to an unusual degree. The cinders in the gases are ejected at high velocity and produce a "sand-blasting" action, that tends to dislodge loose scale and leave vulnerable surfaces exposed. The gases contain both carbon and sulfur compounds which combine with moisture to form active acids. Finally, the plates are exposed to rapid and extreme variations in temperature. Byers Wrought Iron has an unusually adherent scale, that resists the abrasive action. It is highly resistive to corrosion. And quick changes in temperature do not set up destructive stresses and strains in the material.

Byers Wrought Iron is a veteran in this punishing service, and its effectiveness is suggested by its wide-spread use. The engineering departments of a number of railroads regularly apply it to control bridge maintenance and structures in which it is used can be found in a majority of the states.

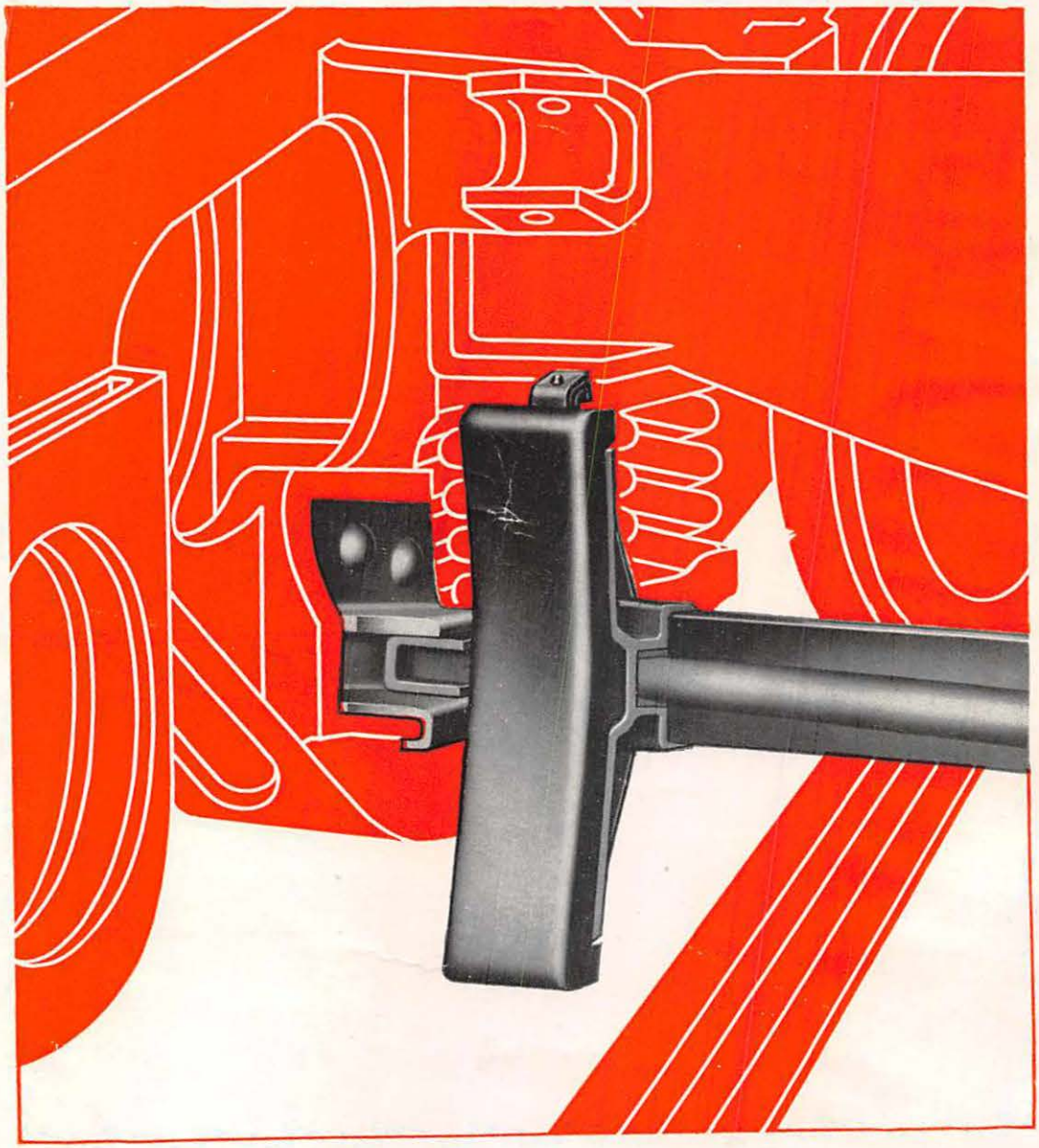
The service qualities provided by Byers Wrought Iron come from its unique structure . . . tiny fibers of glass-like silicate slag threaded through the body of high purity iron. These fibers help anchor the protective scale, and halt and diffuse corrosive attack. The composition and structure also permit temperature variations to be endured without damage.

You will find some pictures and reports of a number of blast plate installations, with details of the methods of fastening used by various engineers, in our bulletin "Wrought Iron in Bridge Construction." We will be glad to send you a copy. Byers Wrought Iron is available in any quantity for your projects.

A. M. Byers Co., Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco, Atlanta.

BYERS
GENUINE WROUGHT IRON
TUBULAR AND HOT ROLLED PRODUCTS
ELECTRIC FURNACE ALLOY STEELS · OPEN HEARTH ALLOY STEELS
CARBON STEEL TUBULAR PRODUCTS

CORROSION COSTS YOU MORE THAN WROUGHT

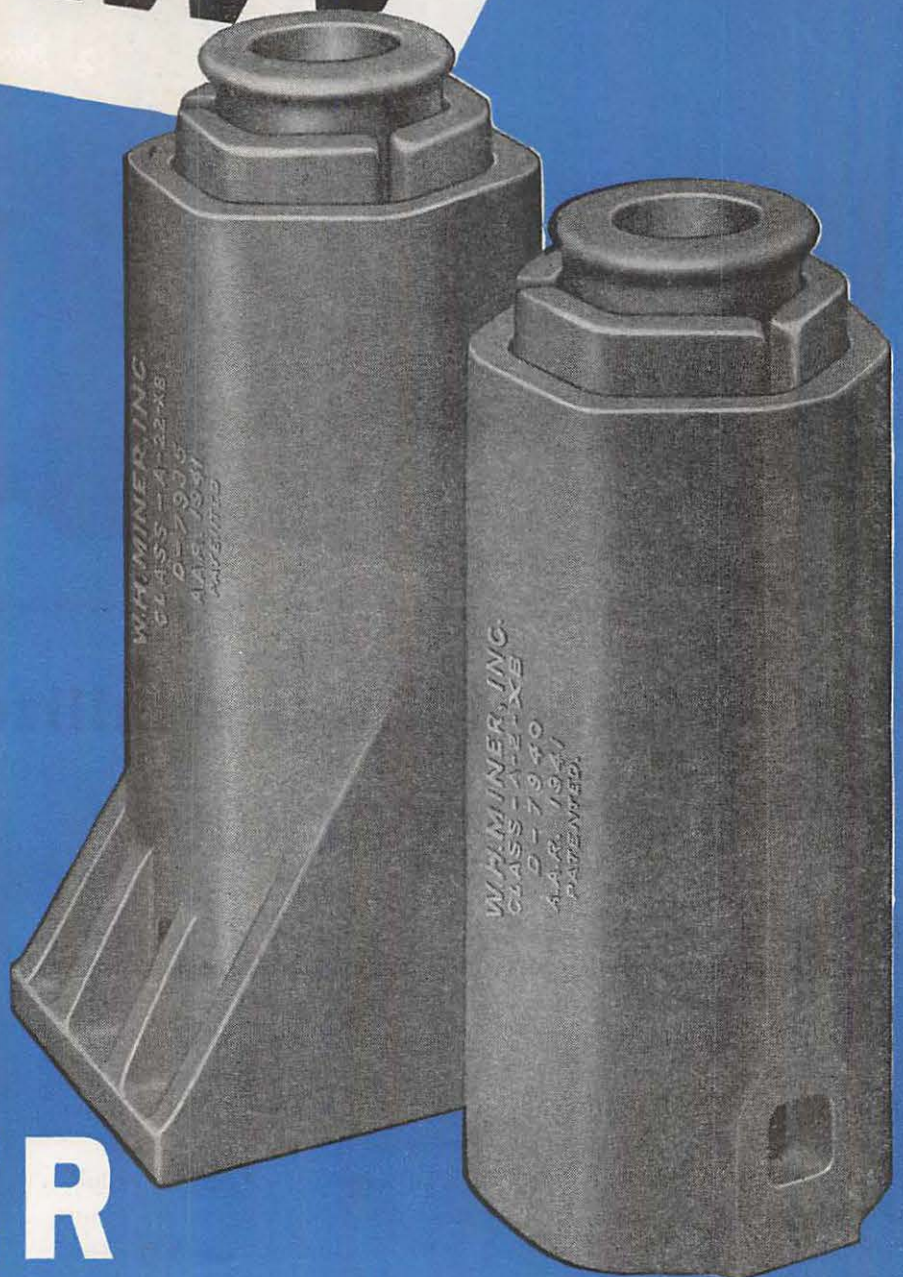


• • • 45 Major Railroads and 11 Private Car Companies now have 146,464 Interlocking, Self-Aligning Unit Brake Beams in Service.

UNIT TRUCK CORPORATION NEW YORK

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933 at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 120, No. 14.

QUALITY



MINER

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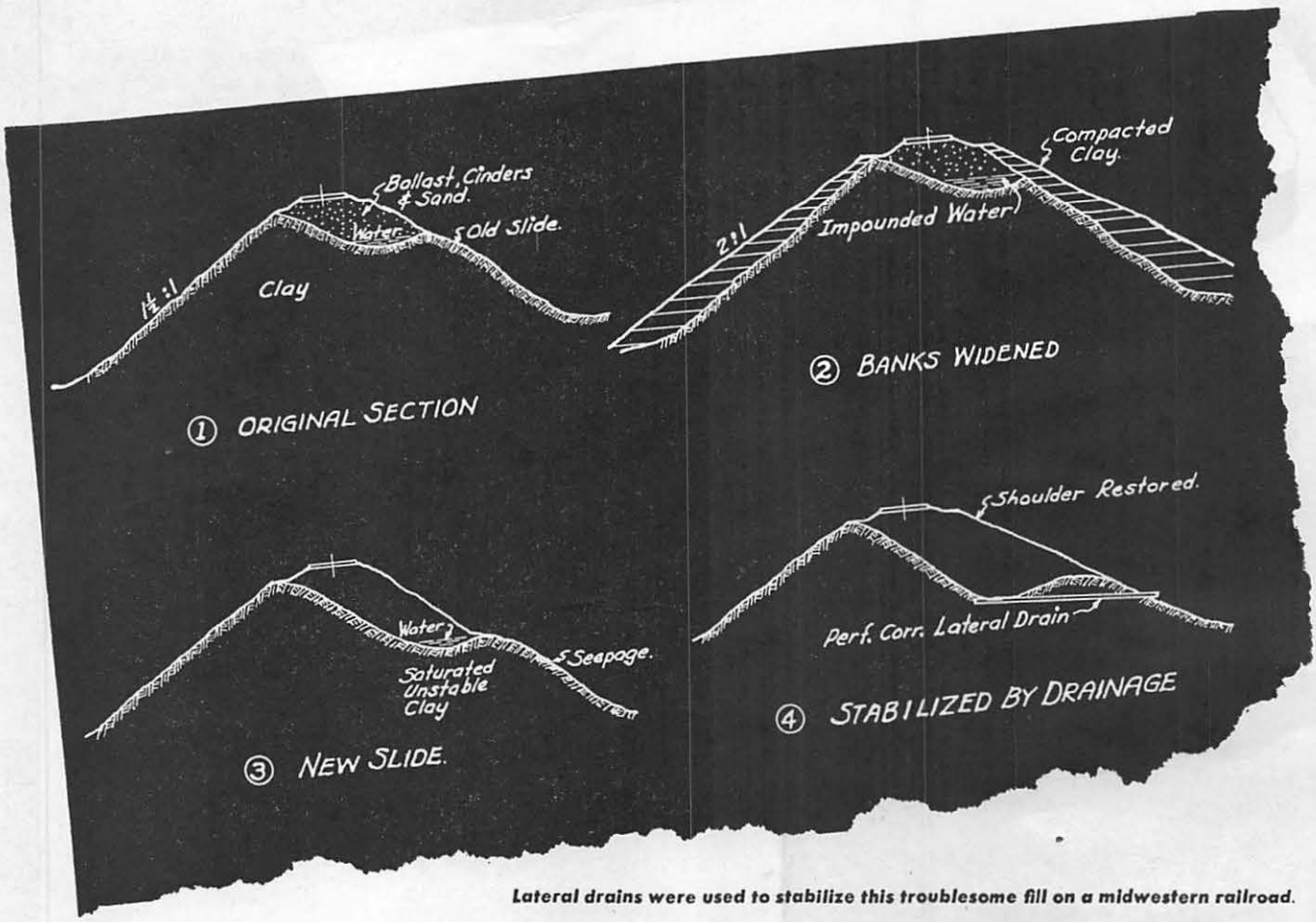
POSITIVE IN ACTION

STURDY

ABSOLUTELY RELIABLE

W. H. MINER, INC. CHICAGO



Lateral drains were used to stabilize this troublesome fill on a midwestern railroad.

How this long fill was stabilized by tapping 9′ ballast pockets

• When maintenance engineers tackled this mile-long trouble spot of mucky black gumbo soil, they found ballast pockets to a depth of 9 feet under the ends of each tie.

Timber piles failed to stop earth-slides; so maintenance men looked to ARMCO Perforated Pipe. Here they found the answer.

Lateral drains installed about a foot below the ballast pockets completely drained the impounded water. Speed restrictions were lifted, and this section of roadbed no longer required extra maintenance.

ARMCO Perforated Pipe can give you quick, efficient drainage wherever ballast pockets prove costly. The flexible corrugated metal design and strong joints resist crushing and disjointing under heavy loads at high speeds.

An Armco engineer will gladly give you full information about ARMCO Perforated Pipe. Write your nearest Armco Drainage & Metal Products, Inc. office—or the general offices of the company, 2165 Curtis Street, Middletown, Ohio.

EXPORT: THE ARMCO INTERNATIONAL CORPORATION

Fill drains of ARMCO Perforated Pipe continue to operate even during the winter.

ARMCO

Armco Drainage & Metal Products, INC.

A small convenience, but cool, fresh drinking water . . . available when the passenger has a thirsty desire . . . pays off in "Happy Travelers".

Westinghouse incorporated the ideas of 15 railroads in the design of this new railroad water cooler. The result . . . a modern, compact hermetically-sealed unit that occupies less than one square foot of floor space. Just right for railroad service.

The Westinghouse Railroad Water Cooler has 5 outstanding features:

1. *Economical Maintenance.* Refrigeration system hermetically-sealed—refrigerant and oil sealed in, dirt and moisture sealed out. Complete refrigeration system replaceable as a unit. No oiling required.

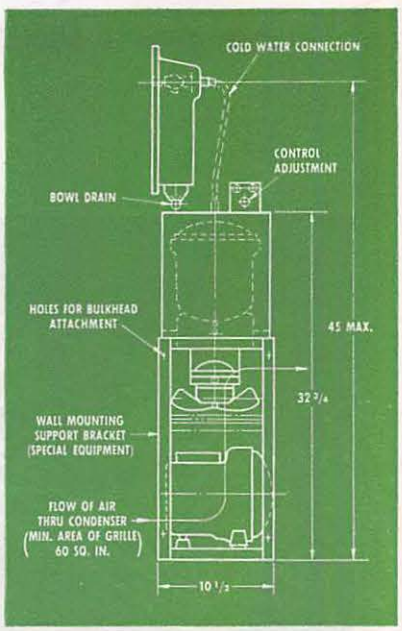
2. *Convenient installation.* Cooler easily mounted on floor or wall in concealed location. Spigot and bowl flush-mounted on enclosing panel. Requires only water and electrical connections.

3. *Ample capacity.* Sufficient cold water for needs of 120 people under ordinary conditions.

4. *Automatic operation.* Keeps drinking water refreshingly cool 24 hours a day.

5. *Economical operation.* Eliminates costly inconvenient icing.

Consult Westinghouse for more detailed information on modernization of passenger cars with compact, dependable water coolers. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-95117

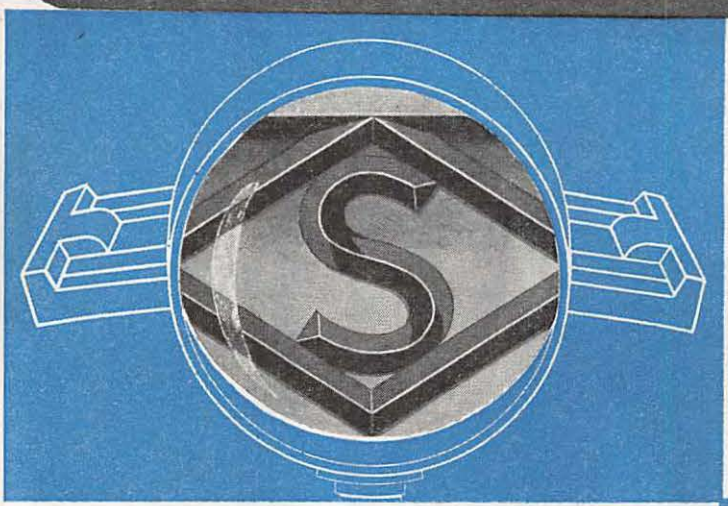


MODERNIZE WITH **Westinghouse**

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

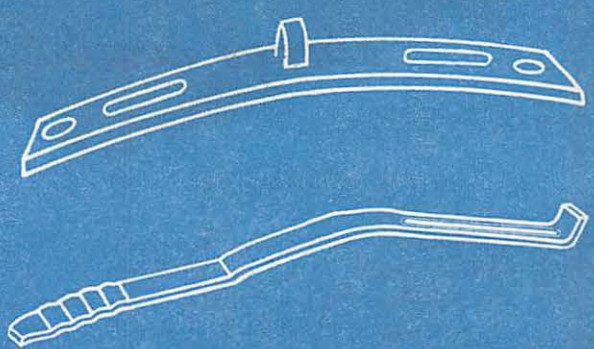
FOR OVER 60 YEARS THE BEST KNOWN NAME IN RAILROAD ELECTRICAL EQUIPMENT

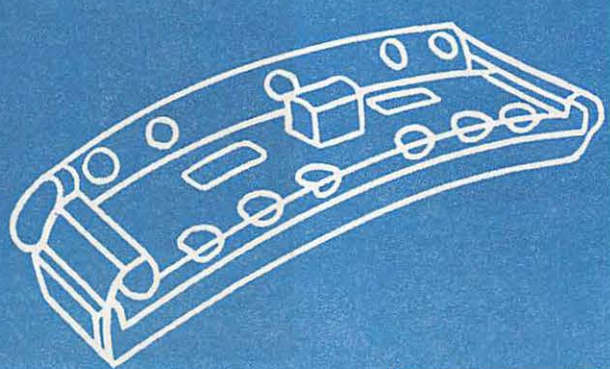
Progress with



On a brake shoe, the Diamond-S trade mark is more than a mark of identification. It is a mark of value, that special value which denotes maximum economy coupled with maximum safety.

Recent milestones in Brake Shoe's railroad history include the Duplane steel back and the Brake Shoe Lockey.





. . . also the Samson driver shoe designed for more efficient service.

AMERICAN
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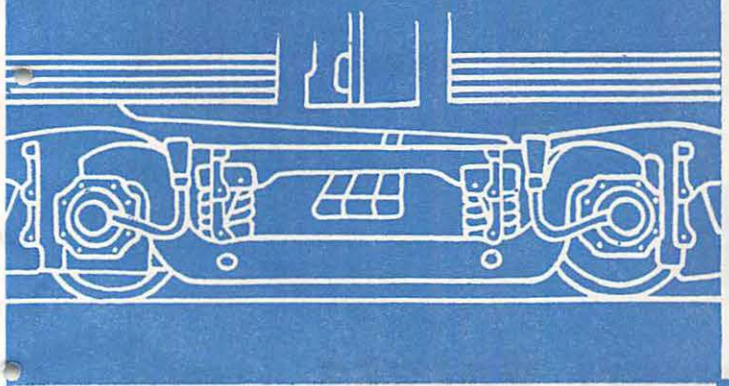
COMPANY

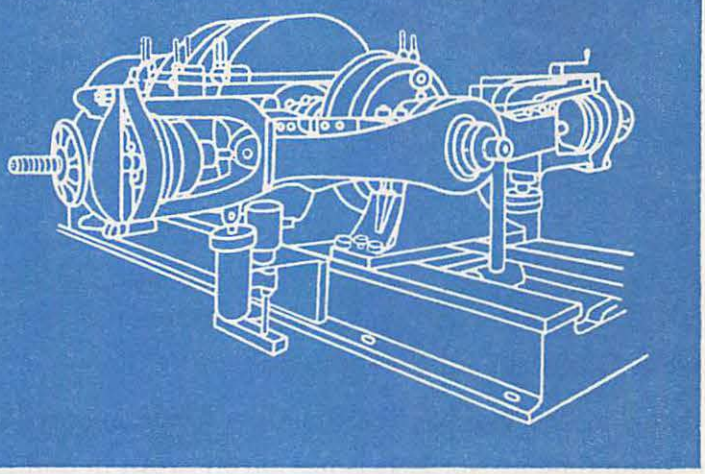
4535

American Brake Shoe



Of special importance is the brake shoe testing machine which duplicates operating requirements far in excess of conditions encountered in service.

A relatively new but proved device is the American Brake Shoe Controller designed to prevent slid flat wheels under passenger cars.



From American Brake Shoe research, railroad men rightly expect future developments that will improve operations under tomorrow's higher speeds and severe demands.

BRAKE SHOE AND CASTINGS DIVISION

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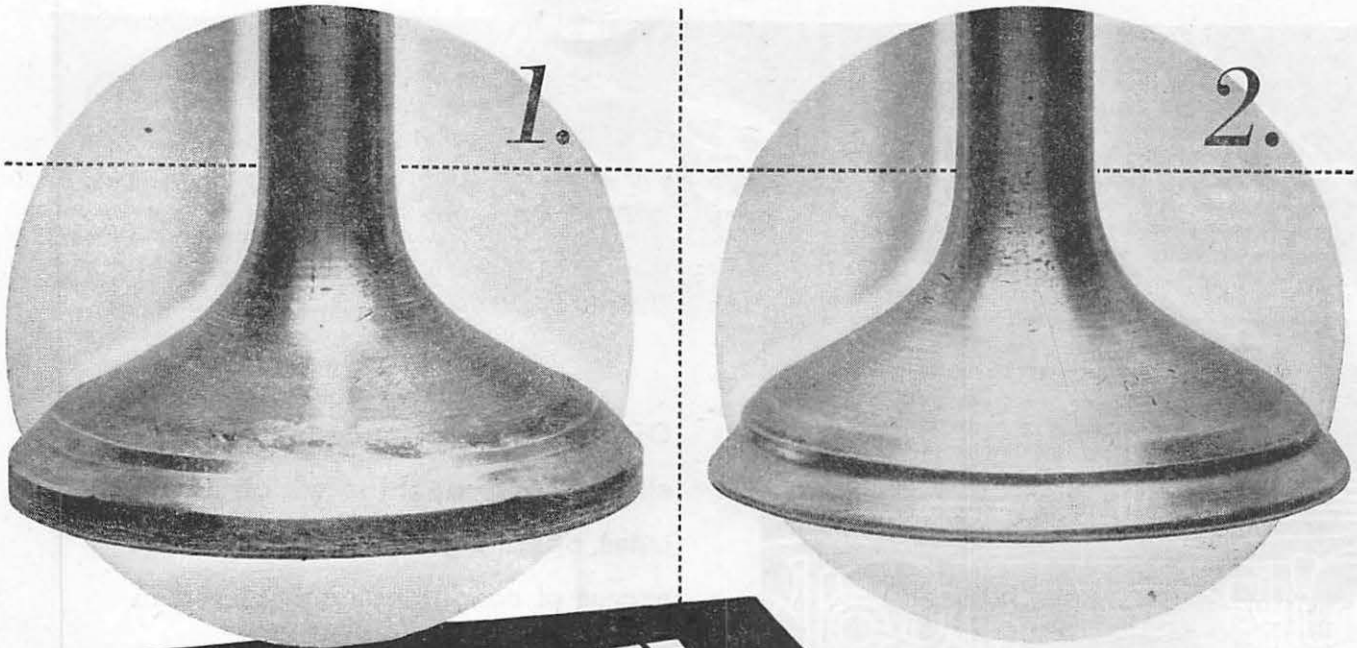

TRIPLE LIFE...

DIESEL VALVES AT HALF THE COST

Valve No. 1 at the left was removed for replacement after service in a Diesel switch engine. It is ready for the scrap pile.

No. 2 is an old valve, reclaimed by hardfacing with Stoody No. 6 Rod and installed at the same time as No. 1. It is just nicely worn in and is good for at least twice the life to be expected from a new valve.

The cost of a new valve is $10.50.

Hardfacing, including machining, costs only $5.00 and, since the hardfaced valve gives triple the service, the head can stay on three times as long.

You can apply hardfacing to new valves before installing them or hardface old valves and hold them in stock for installation.

For details, ask your nearest Airco office or write Dept. RA, Air Reduction, 60 E. 42nd St., New York 17, N. Y. In Texas: Magnolia Airco Gas Products Company, Houston 1, Texas.

Costs come down under the Airco Plan

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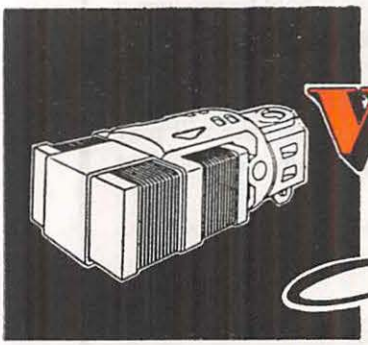
MODERNIZE with



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ELIMINATE JERKS AND JARS

★ CAN BE APPLIED TO OLD OR NEW CARS

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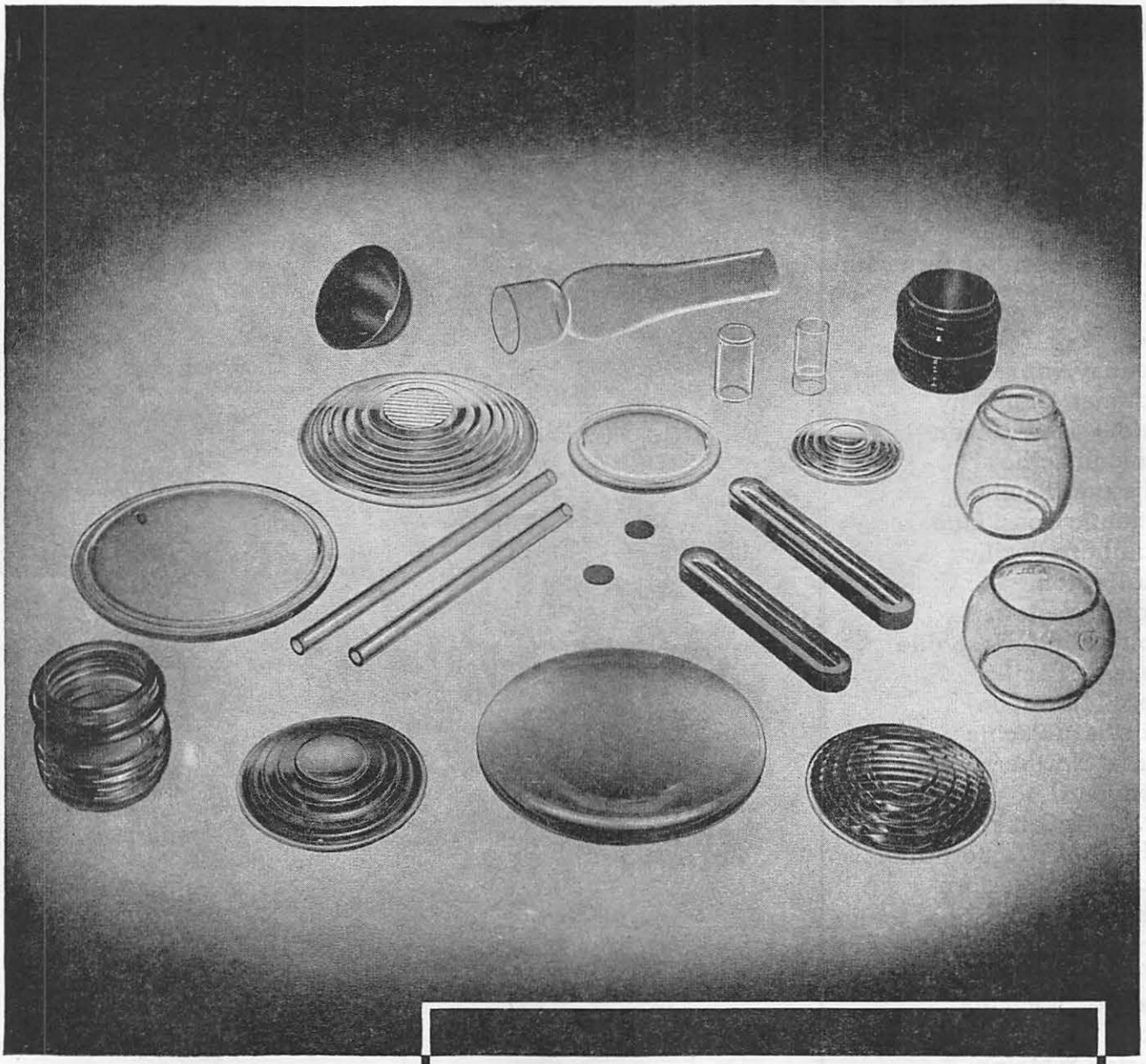

Past, Present and Future Railroad Glassware Supplies

Over a period of many years Railroads have depended on Corning for glassware. During that time Corning has developed production facilities and manufacturing know how to produce a steady and increasing supply of Railroad Glassware—all to A.A.R. specifications.

These production facilities backed by Corning's research and engineering skills are positive assurance that Corning will play an important part in the present needs and future development of all Railroad Glassware requirements.

Safety depends on Signal Glassware. Railroads depend on CORNING. *Corning Glass Works, Corning, N. Y.*

"Corning" is a registered trade-mark and indicates manufacture by Corning Glass Works, Corning, N.Y.

CORNING
means
Research in Glass

First IN REGULAR SERVICE!

with

Aireon RAILROAD RADIO!

D. & R. G. W. was *Ready* for FCC *Frequencies* with Space Radio Communication

First to apply for and first to be granted authority from the Federal Communications Commission for the use of radio frequencies in regular Railroad Radio Service is the Denver & Rio Grande Western Railroad—using Aireon Railroad Communication Systems *exclusively*. The frequencies recently authorized for railroads are to be used in providing communication between the engineer on fifteen of the Rio Grande's freight Diesels and the conductor on cabooses behind long freight trains handled through the Moffat Tunnel across the Rockies.

These radio units are designed and built specifically for railroads to operate with frequency modulation (FM) at 159.89 megacycles. They will be used in conjunction with Aireon's Inductive System to provide communication between moving trains and wayside stations.

As the FCC in its announcement said "Extended experimentation has been made regarding the use of railroad radio for safety purposes for several years, and many experimental authorizations have been previously issued to railroads and manufacturers, *but this is the first grant since the regular railroad service was established by the Commission Dec. 31, 1945.*"

Aireon has pioneered in the development of Railroad Radio Systems—has "field tested" its equipment in over 2,000,000 miles of actual railroad service.

The D. & R. G. W. has experimented for over a year with many makes and types, and has played a leading part in developing radio equipment suitable for practical use.

Aireon's equipment has been selected for the first permanent installation of VHF (Very High Frequency) on any railroad in America.

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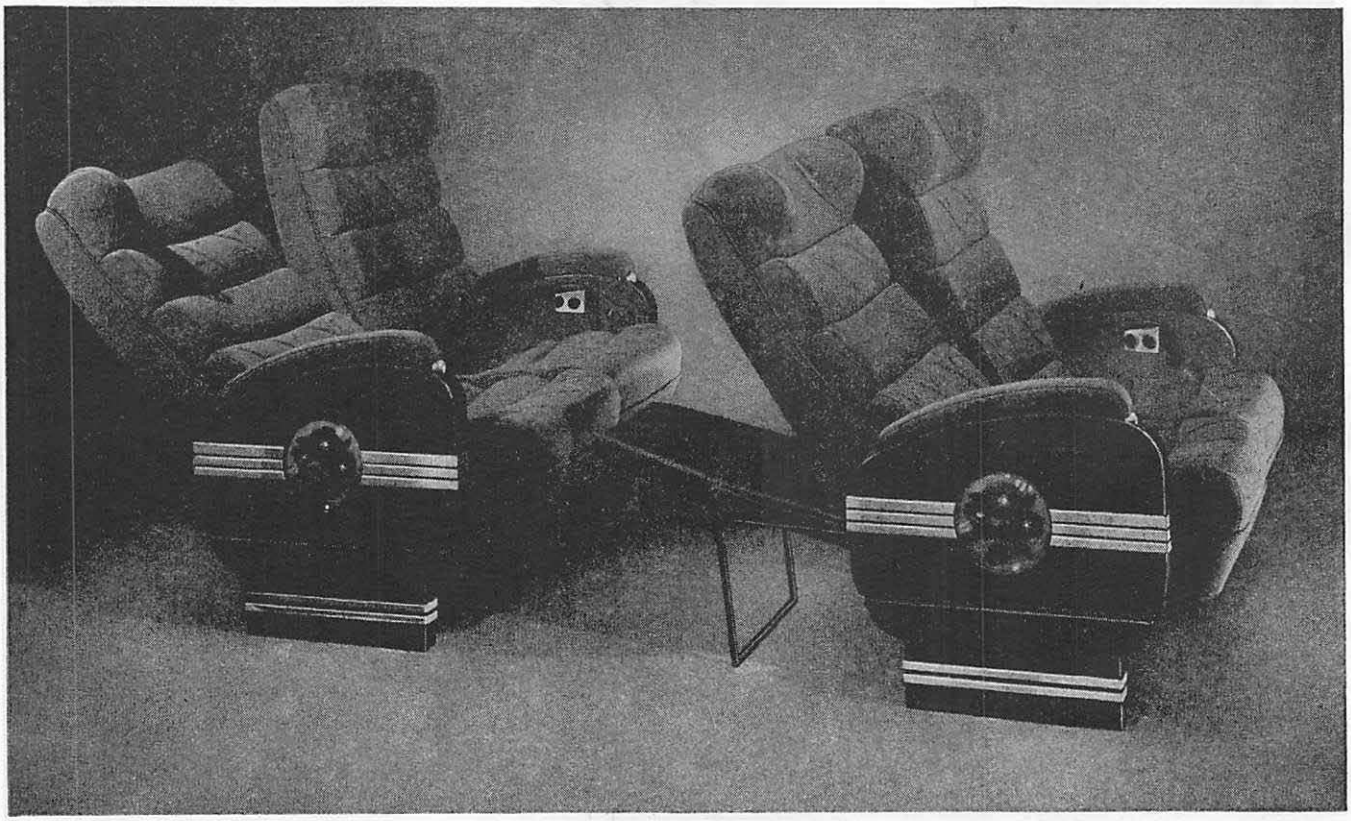
Sleepy Hollow COMFORT sets the pace for Modern Seating



Heywood-Wakefield Day-Night Coach Seat No. 825

Individually controlled program selection through a radio speaker built into each face rest.

Smooth, positive adjustment through every conceivable position.

Adjustable leg-rest gives correct support for complete relaxation.

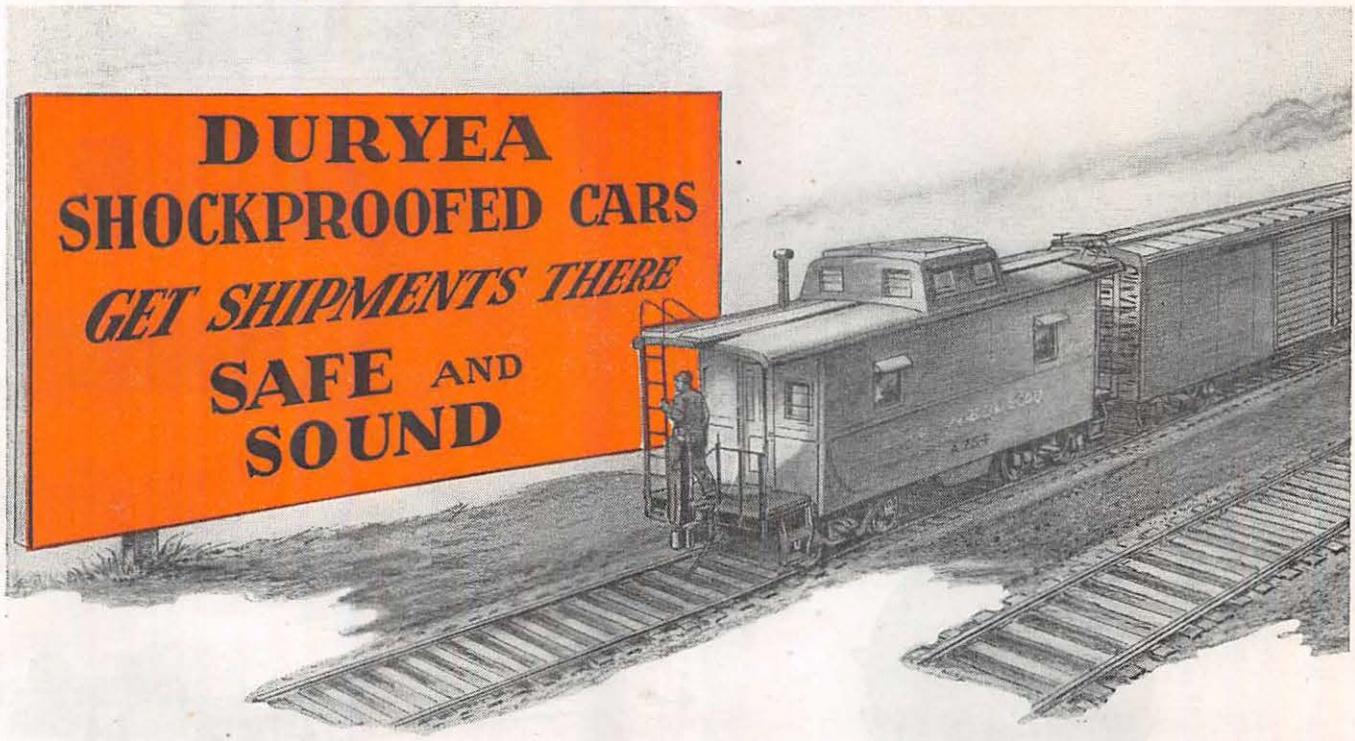
FUNDAMENTAL to the popularity of Heywood-Wakefield seats is the supreme comfort that justifies the restful implications of "Sleepy Hollow." For our designs are based upon long, scientific application of anatomical knowledge to the business of making seating comfortable. In the case of the specific seat shown here, the design reflects close cooperation with Pullman-Standard Car Manufacturing Company. Smooth functioning throughout exceptionally long service is assured by our skills and facilities for soundly engineered construction. Make the most of your expectations for your modernization program by talking over your seating requirements with the nearest Heywood-Wakefield representative.

HEYWOOD-WAKEFIELD

EST. 1826

Transportation Seating Division

Gardner, Massachusetts

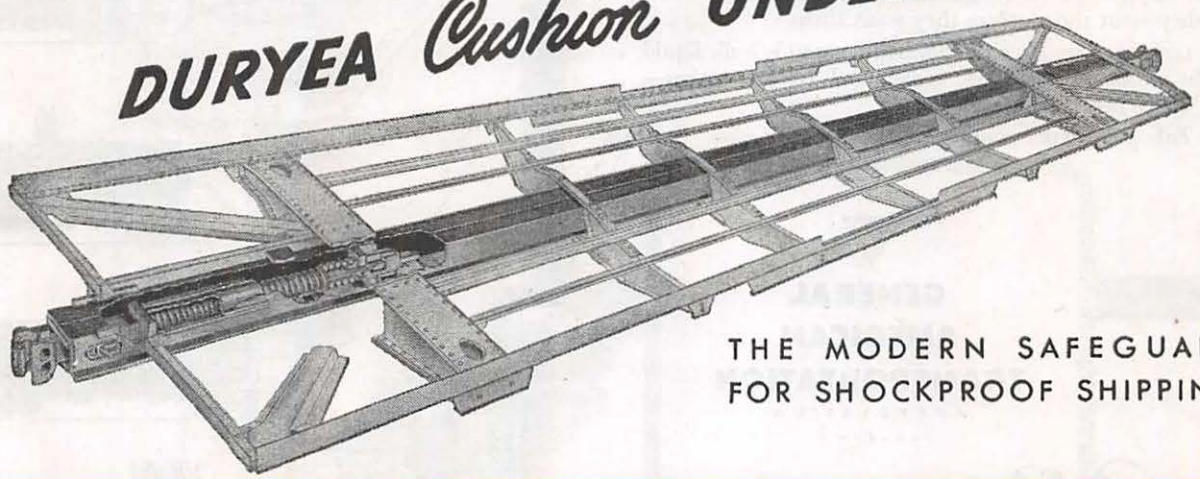


The way to stop the rising tide of damage claims which cost railroads, shippers, and receivers millions of dollars annually lies in a wider use of Duryea-equipped cars. The Duryea Cushion Underframe actually "floats" car body and lading on a cushion of springs, impervious to all the normal jolts and hazards of coupling and train service.

The great number of these cars now in service over the years have fully proven the merit of the Duryea Cushion Underframe.

The Duryea principle not only provides safer shipping, but also answers the problem of how to reduce car maintenance costs. No Duryea Cushion Gear has ever had to be replaced except for wreck damage.

DURYEA Cushion UNDERFRAME



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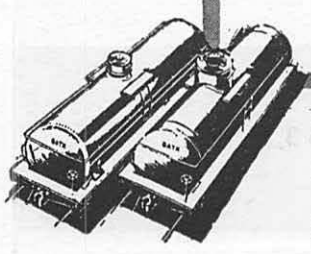
Take your tank car problems to our nearest office



GENERAL AMERICAN TRANSPORTATION
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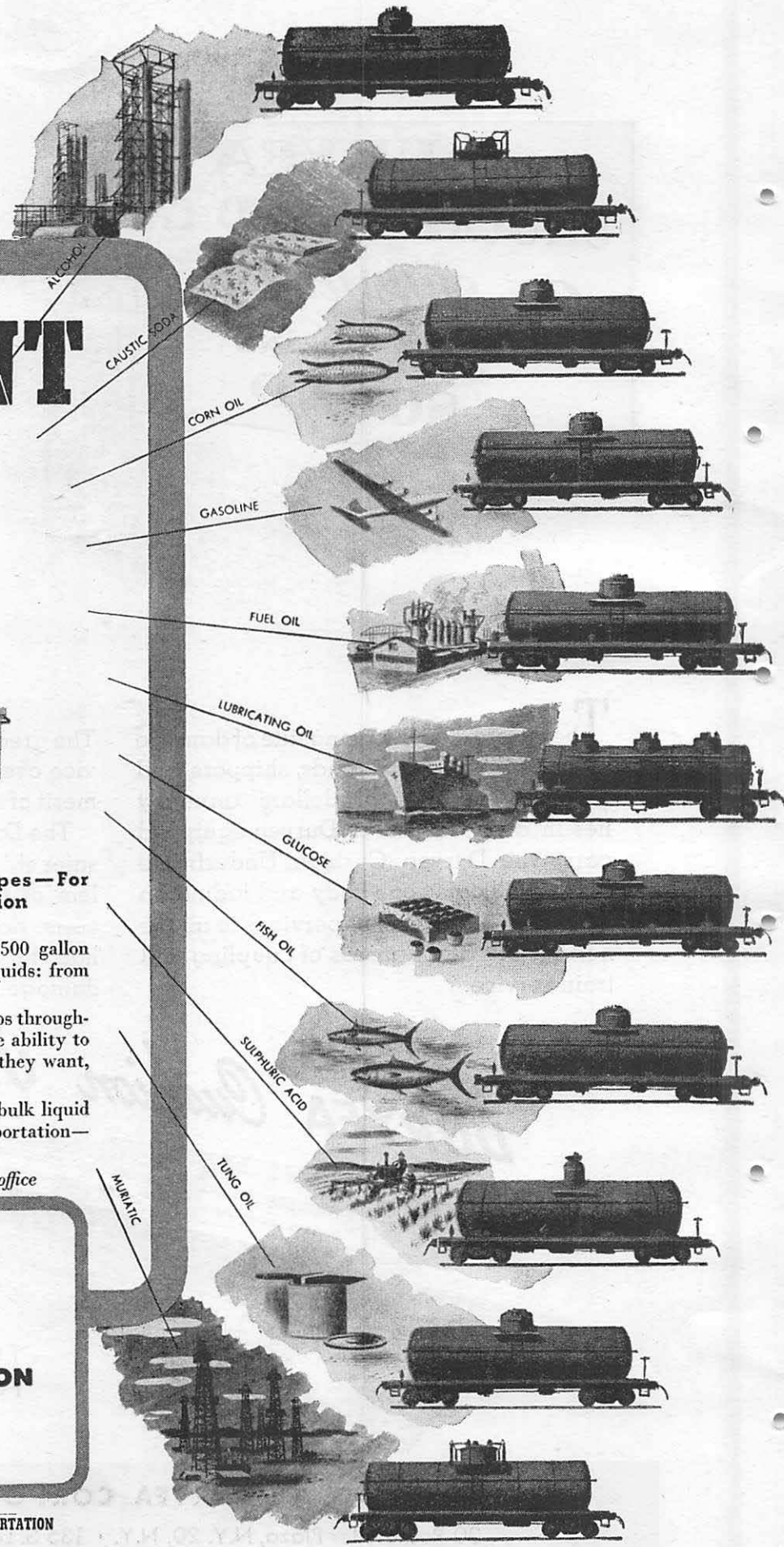
CHICAGO



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FACTS... THAT FIGURE IN ELIMINATING DEADWEIGHT

This new bulletin shows how the use of Haskelite Plymetl can eliminate deadweight from your passenger coaches. For example, in a coach having only 400 square feet of partitions, Plymetl partitions used instead of hollow steel will save approximately 1,200 pounds. Deadweight reductions like this are important to you. They may be saved outright or used to increase or improve the safety, performance and passenger appeal of your cars.

The new Plymetl bulletin covers the types of Plymetl available, fabrication, finishing and fastening data. Stiffness and weight charts point out advantages over steel and aluminum.

You will find your new Plymetl bulletin a guide to greater savings in cost and weight. Mail coupon for your free copy today.

Plymetl is made by bonding thin sheets of metal to one or both faces of a plywood plaque. Its construction effects the most efficient distribution of these materials. It combines high strength qualities of metal surfaces with the low density of wood. Result: Plymetl makes an ideal structural material. It simulates an I-beam with the metal faces taking the part of the flanges and the lightweight plaque acting as the web.

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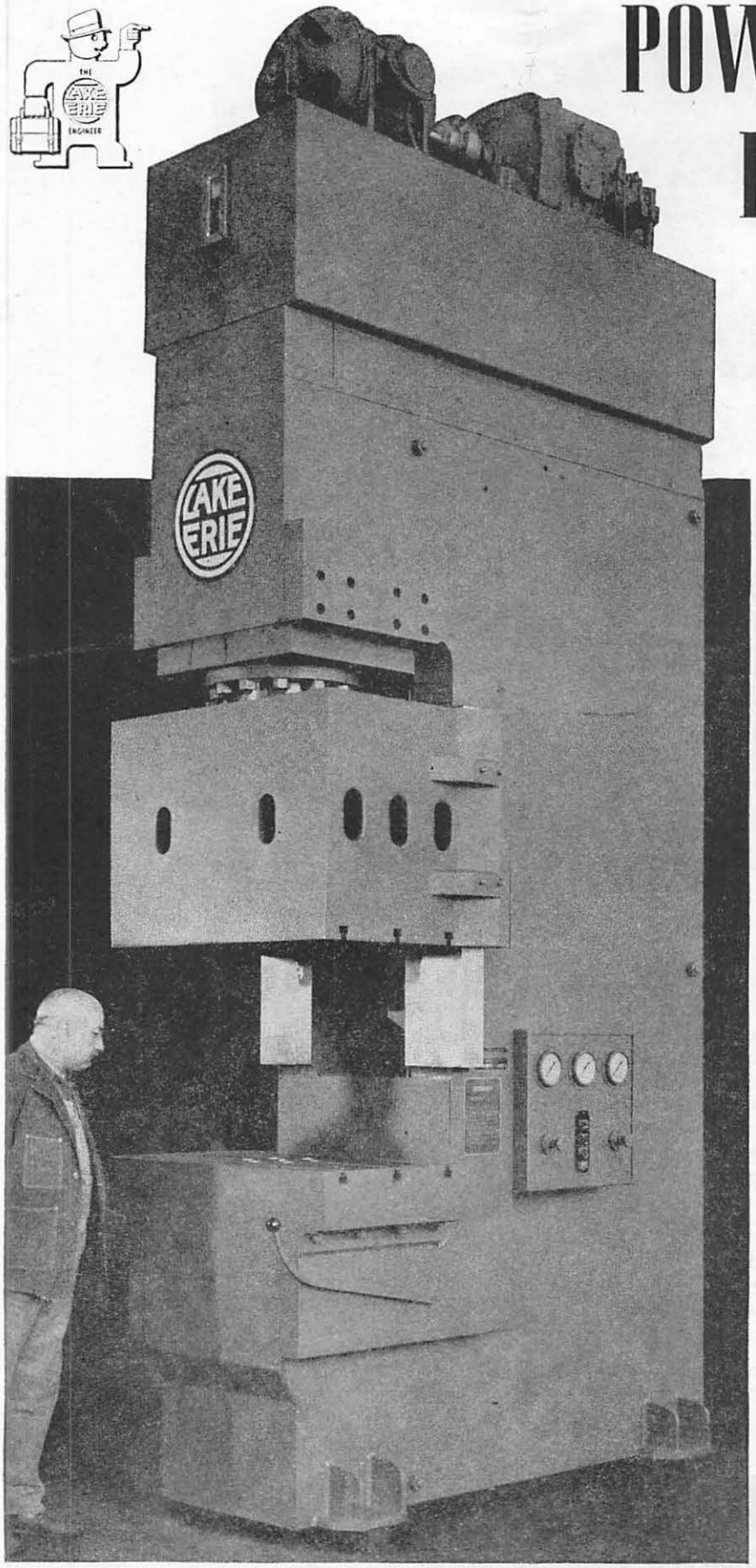
CANADA: Railway & Power Engineering Corporation, Ltd.



POWERFUL as a LOCOMOTIVE

● 200-Ton Hydraulic Press designed to speed construction and repair of Cars and Locomotives...

Lake Erie Hydraulic Presses are the last word in equipment for car and locomotive builders, railroad suppliers, and progressive railroads that keep their shop practices and facilities up-to-the-minute. Hydraulic presses are compact and powerful...versatile and fast. They save man power, man-hours and money.

Lake Erie offers a complete range of hydraulic presses for railroad work... rugged presses that speed the building, rebuilding and repair of railroad equipment. Illustrated is one of the many types and sizes available...a 200-ton "C" Frame Press that features:

- ★ Extra heavy "C" Frame construction for minimum deflection.
- ★ Rigidly guided platen. Welded steel housing.
- ★ 35-ton cushion in bed.
- ★ Sensitive control of speed by direct stroking of pump.
- ★ Control by hand lever readily accessible to operator.

Press has a 42" right to left and 24" front to back die space, 30" daylight and 16" stroke. Closing speed 350" per minute. Return speed 345" per minute.

The design and construction of hydraulic presses is Lake Erie's specialty —has been for years. No matter what your needs, Lake Erie Engineers can meet them...quickly...usually with a standard model...but with a special model if necessary. Consult Lake Erie now about your hydraulic press requirements.

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LAKE ERIE ENGINEERING CORP., 871 Woodward Ave., Buffalo 17, N. Y.
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Twice as SOFT as the A.A.R. 1915 spring.

LOAD CARRYING PLUS SNUBBING SPRINGS

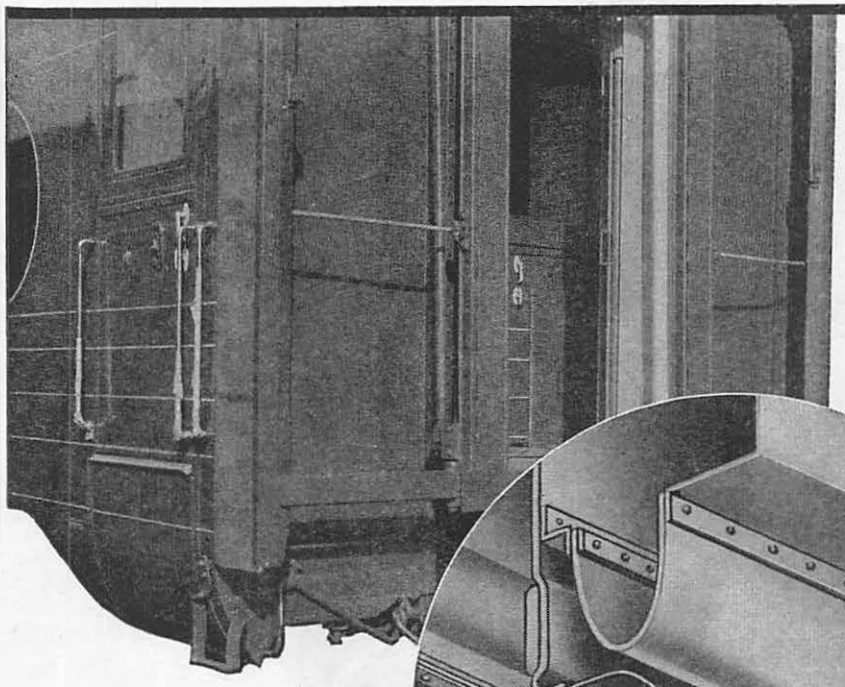
Let us demonstrate what these springs will do under one of your Tenders. In cooperation with your Engineers, we'll furnish instruments to make recordings of the riding qualities "Before and After." ***Write for Bulletin No. 13.***

1489

HOLLAND COMPANY

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

MORTON-ZIP WEATHER-SEALS



for STREAMLINED VESTIBULES

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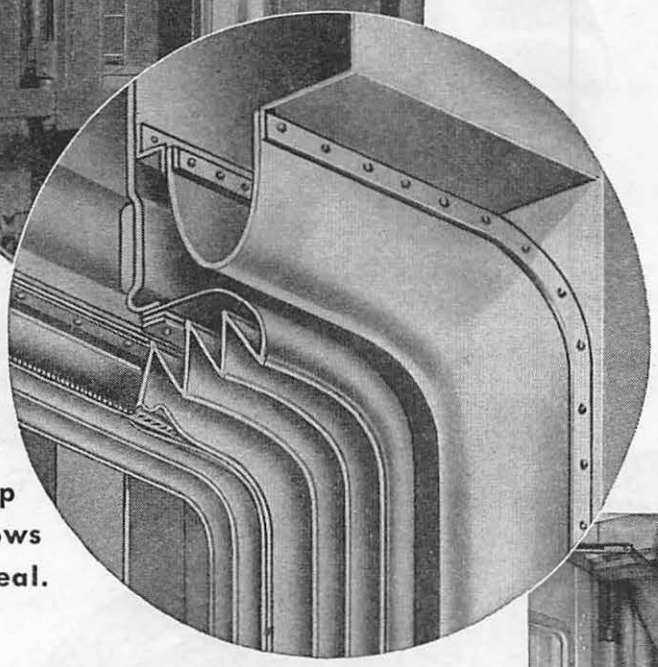

Morton-Zip Detail — Above — car under construction ready for installation of Morton-Zip Weather-Seals. Circular cut shows arrangement of weather-seal.

EASILY ADJUSTED

View below shows trainman fastening the Morton-Zip closure between two cars on the famous Union Pacific Streamliner City of San Francisco.

Protects interiors— Adds to passenger comfort

Protect the interiors of spotless new cars by sealing out the dust, soot, rain and snow that filters through their diaphragm face-plates. Morton-Zip weather-seals are proof against dirt intrusion and air-draughts; they improve the results of air conditioning, and they tend to insulate against running noises. Your passengers will appreciate the added comfort of these snug vestibule closures. In modernizing old cars, install Morton-Zip to give them new car weather protection. Cars equipped with Morton-Zip may be coupled to cars which lack this equipment, when necessary, without interference or adjustment. Durable and economical. Write today for estimates and complete information.

Sales Offices—NEW YORK, ST. LOUIS, ST. PAUL, WASHINGTON, SAN FRANCISCO, LOUISVILLE, MONTREAL

MORTON

MANUFACTURING COMPANY

5105 WEST LAKE STREET, CHICAGO 44, ILLINOIS

PHOTO COURTESY OF THE BETTMAN ARCHIVE

FROM A METAL MAKER'S "FAMILY ALBUM"

WHEN STEEL WAS MADE LIKE THIS—

The Home of "Standard" Was Producing 1500 Tons a Year

Three quarters of a century ago, you might have seen activity like this at "Standard." An important producer of steel, the plant had 28 four-pot melting holes. Metal, broken into small pieces, was put into pots or crucibles, and melted at a very high temperature. In 1873, 1519 tons of crucible steel were produced . . . an impressive figure for that day. It was used in the making of tires.

Today, Standard's five open hearths have the capacity of 160,000 net tons, and could duplicate the entire output of 1873 in three days. Other departments at Standard have kept in step. Castings, for all classes of service, from 5 pounds to 130,000 pounds, and forgings up to 25 tons are regularly produced.

The experience gained in a century and a half is waiting to serve you. For your forging and casting needs, "Standardize on Standard."

BLW THE BALDWIN GROUP

BALDWIN

FORGINGS AND CASTINGS

The Baldwin Locomotive Works, Standard Steel Works Division, Burnham, Pa., U.S.A. Offices: Philadelphia, New York, Chicago, St. Louis, Washington, Boston, San Francisco, Cleveland, Detroit, Pittsburgh, Houston, Birmingham, Norfolk.

"STANDARDIZE ON STANDARD" FOR YOUR FORGINGS AND CASTINGS

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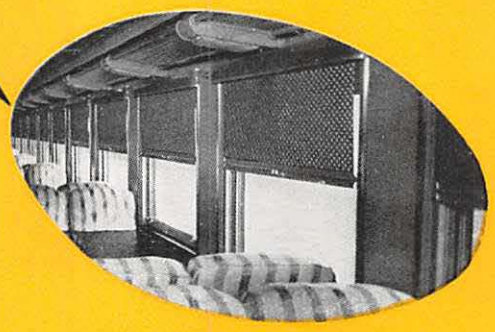

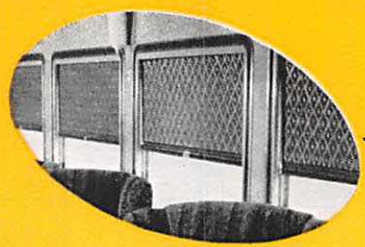

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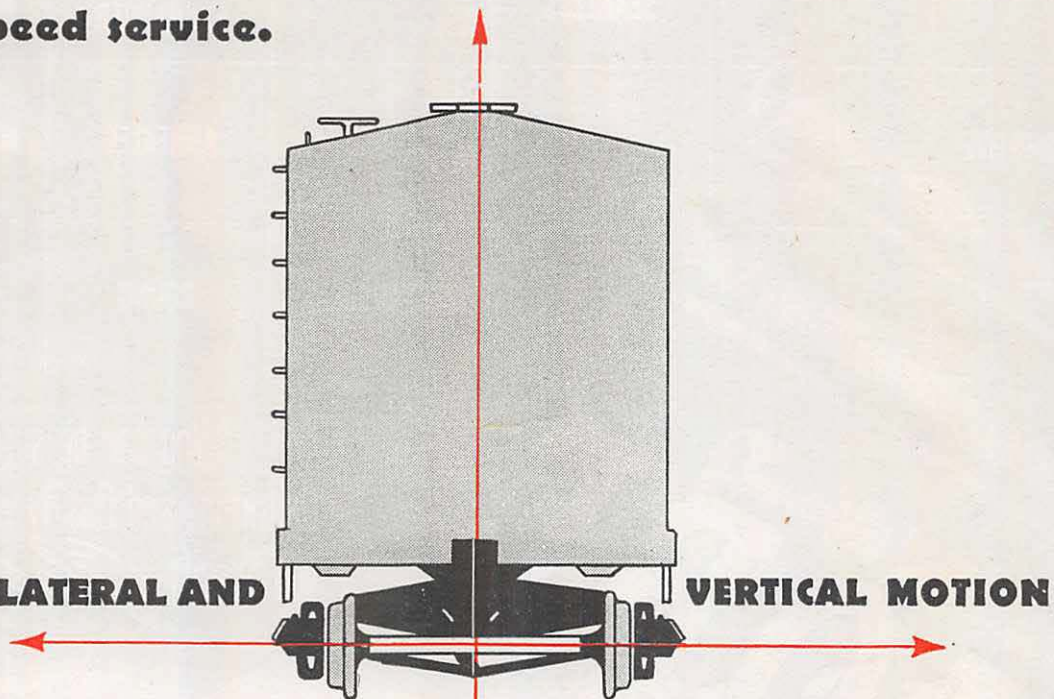

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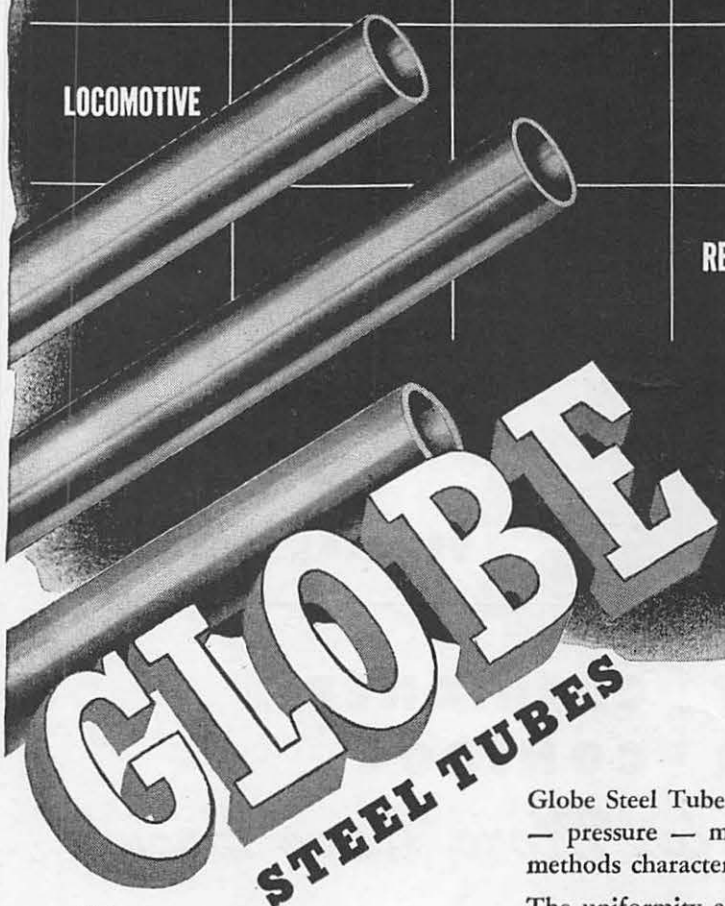

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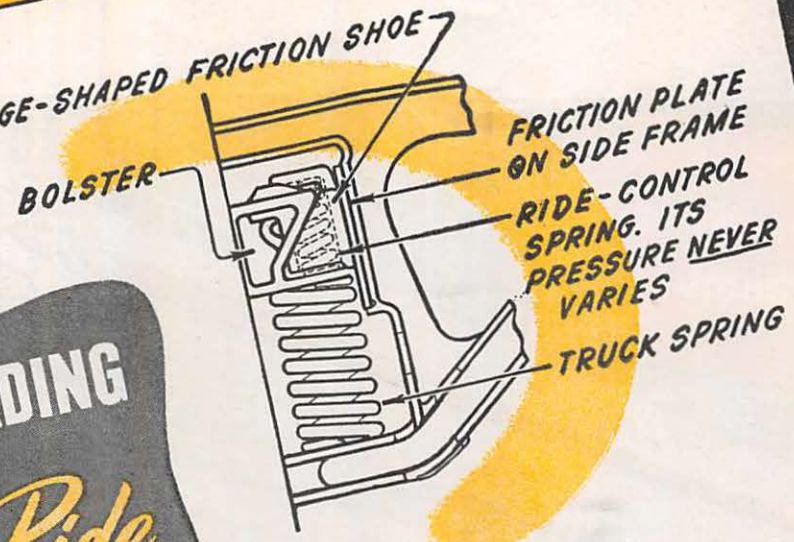

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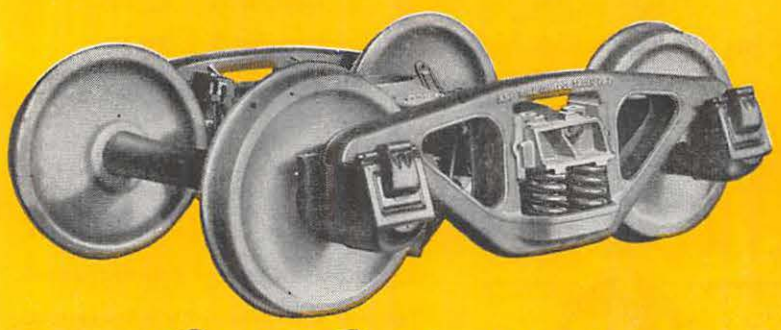

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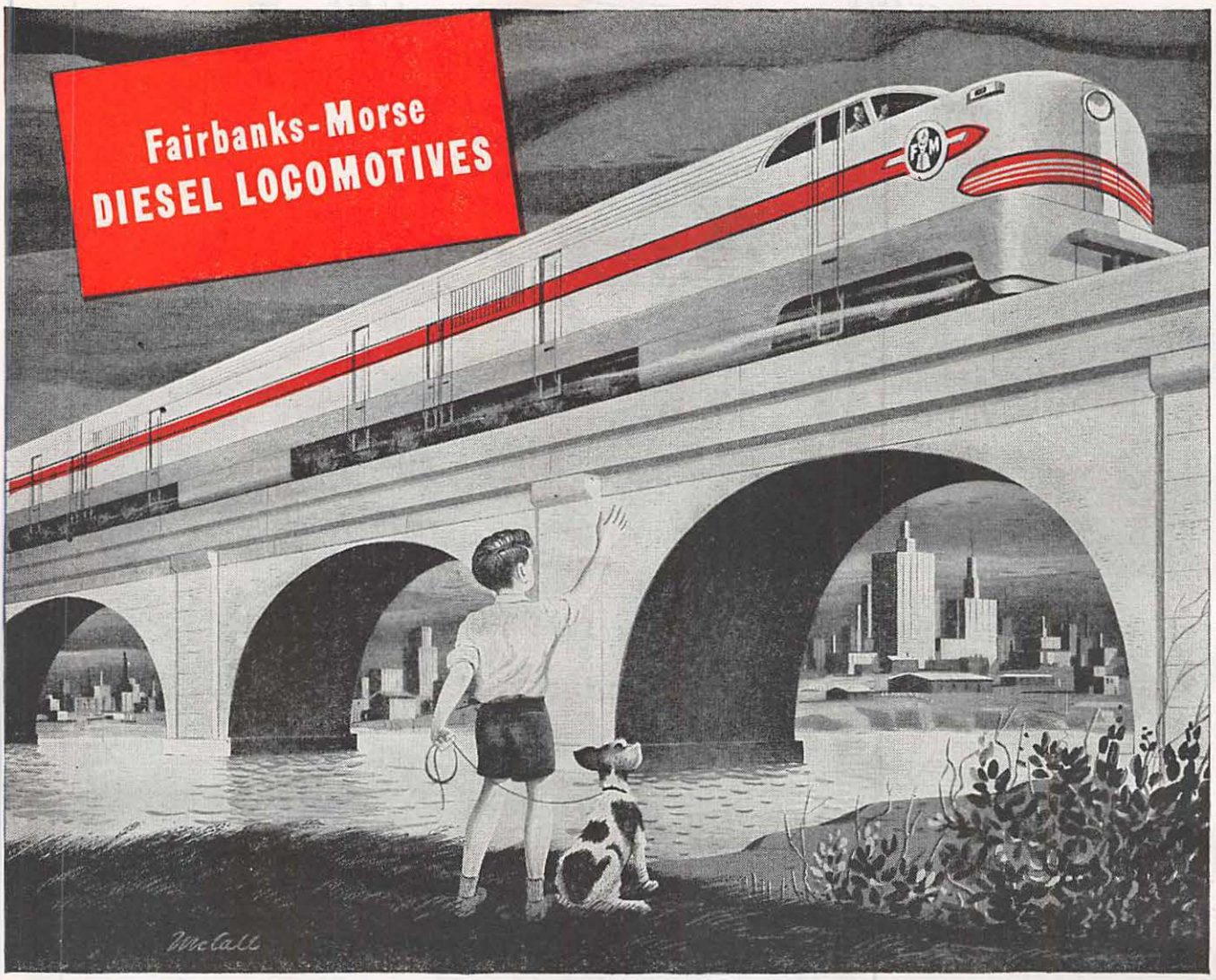

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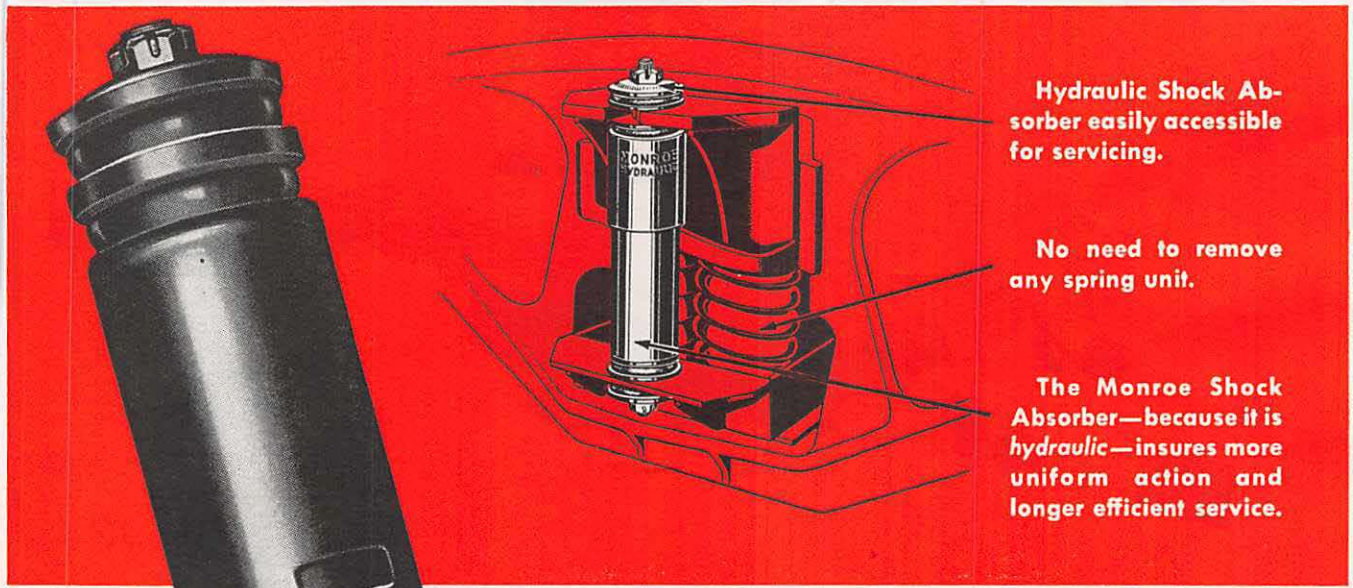

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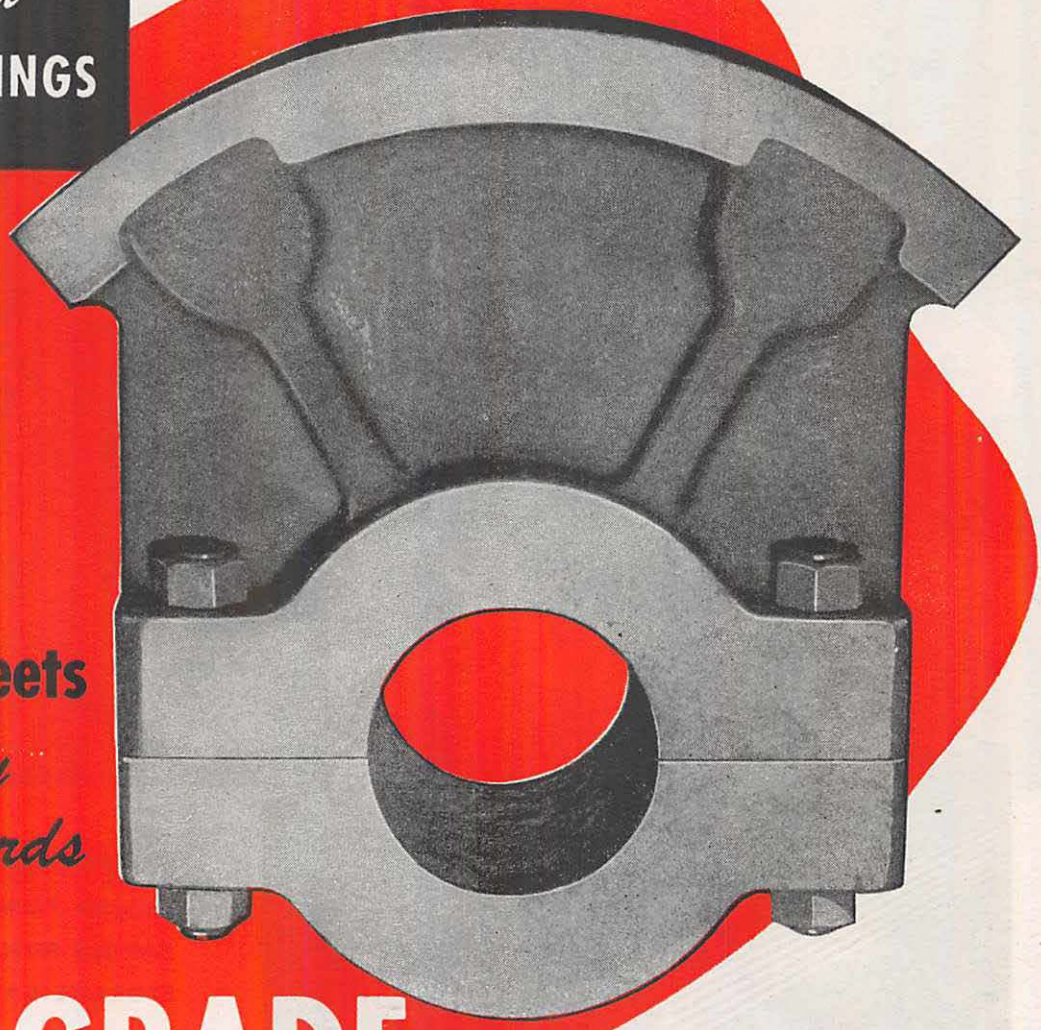

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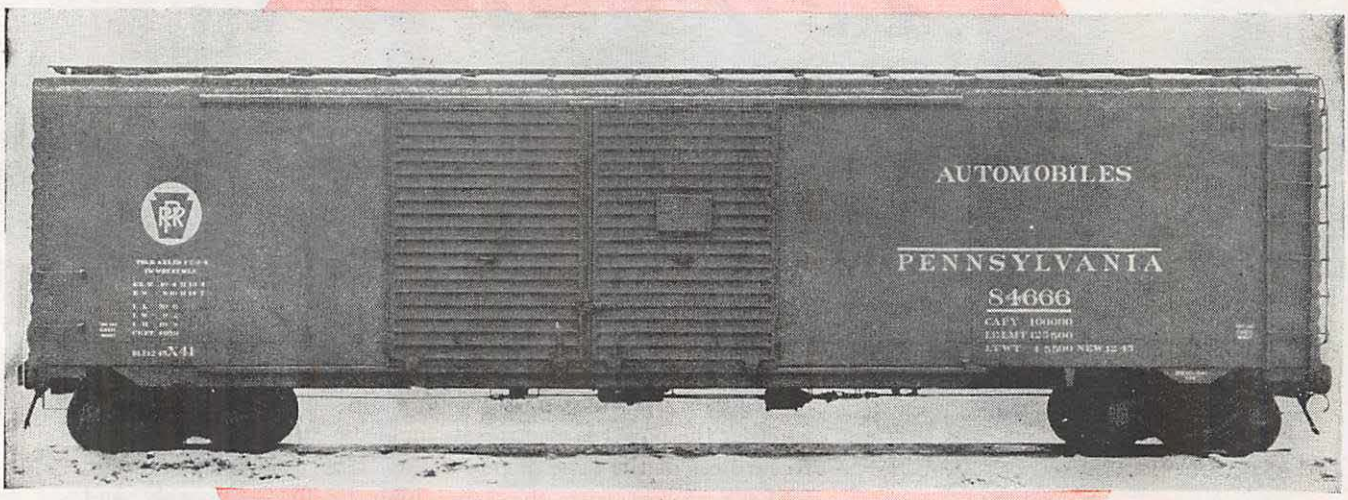

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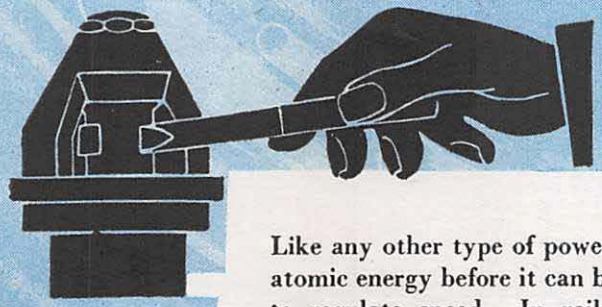
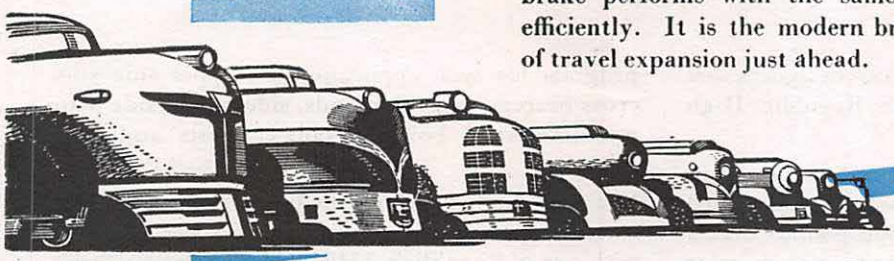


Like any other type of power, means must be found to control atomic energy before it can be utilized. Control implies ability to regulate speed. In railroading this means air brakes—whether the power is electric, steam or diesel, or maybe atomic. Regardless of the type of power the "HSC" electro-pneumatic brake performs with the same high fidelity—smoothly and efficiently. It is the modern brake with a place in the period of travel expansion just ahead.



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Railway Age

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Vol. 120 April 6, 1946 No. 14

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Extensive facilities provided for repairing and servicing freight locomotives operating primarily on 459 mile run between Winslow, Arizona and Barstow, California.

USS Builds All-Welded Cor-Ten Hopper 722

Railroad Research Bureau's design is based on study of 65,000 Cor-Ten cars now in service—Outside frame and welded fabrication reduce opportunities for corrosion.

Joint Operation Aided by C. T. C. 725

Train time is saved by 128 mile installation on long heavy grades on the Moffat tunnel route of the D. & S. L. through the Rocky Mountains.

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PRINTED IN U. S. A.

tempt to conform with the original decision, the unions announced that they could not handle cases before the Board under the "ham-stringing" terms of the Court's prescription; and the Board ceased to function so far as labor participation was concerned. The unions demanded and got a rehearing from the Supreme Court; but the original decision stands.

The Court expressed astonishment at the unions' attitude in a footnote to its current decision, as follows:

". . . it is altogether possible for the union to secure authority in these respects within well established rules relating to unincorporated organizations and their relations with their members, by appropriate provisions in their by-laws, constitution or other governing regulations, as well as by usage or custom. There was

of employees' claims. The opinion of the Supreme Court is clear, however, and will be the law of the land unless, as may happen, Congress may seek to clarify the situation by further legislation.

Needed—a National Policy to Promote Economy in Transportation

I am not criticising the policy of providing waterways, airways and highways at public expense, but these publicly provided facilities are also used for the business of commercial transportation—which is no more public in its nature than is the business of a railroad company —without requiring adequate charges for the use of public property for private profit.

The effect of such a policy is to shift more and more

If the railroads should succumb to socialization, it will not be because they are inefficiently operated or because their legal, traffic and technical departments are not skilfully managed but because they have been inept in conducting their affairs as dominant public opinion demands that they be conducted; or because, although their actual behavior is in the public interest, they are remiss or incompetent in making that fact generally known. A reputation for rectitude cannot be attained merely by trying to refute repeated charges of misbehavior. A man can be said really to enjoy a good reputation, not when he has continually to press suits for slander against detractors but when his rectitude is so well recognized that accusers can find no one who will believe them.

The establishment of such a reputation by the railroads, individually and collectively, is their most pressing problem—embracing but not excluding all their lesser problems. It is also the central problem of all large-scale enterprise—and of the labor unions as well, although the unions show no indication whatever of concern about the matter. Like the managements of large industry of a generation or two ago, they feel that if the courts and the legislatures are, temporarily, with them, it matters little what the "court of public opinion" may think.

Diesel Saturation

assume a proportion of the traffic that will adversely affect its own performance. The ultimate result of such a program would be the need for Diesel locomotives as stand-by power to take care of the peak traffic loads for which no regular assignment at other times could be found—a service now furnished by steam locomotives. The Diesel would have to do the "dirty work" and could no longer be assigned only the "cream" of the traffic.

The fact that a small percentage of Diesel-electrics may now be showing a large saving does not prove that the replacement of all steam locomotives by Diesel-electrics will continue to give the same proportionate results. To the contrary, recent data indicate that there is a saturation point in the ratio of Diesel-electric to steam locomotives beyond which the Diesel-electric operation may show no savings in comparison to steam locomotives.

Not All Engineering

Some of the most important responsibilities of railway engineering officers have to do with matters entirely beyond those involved in maintaining, renewing and improving the fixed properties. One of these extra-curricular responsibilities that is assuming increased importance today is that of protecting the railroads from unreasonable or inequitable expenses in connection with alterations to their properties demanded or required primarily for the benefit of others.

---

determining rail wages, a comparison of railway pay scales with those of other industries must be made and that any inequities found must be corrected. On this basis alone, he said the proposed increase was mandatory. The primary purpose in presenting evidence as to cost-of-living and take-home pay increases was to show that, by taking care of the "gross inequities" in the case by granting the 25 per cent demanded, these factors would also be covered.

"Unprecedented Prosperity" — An additional factor, according to Mr. Melnikow, was the unprecedented prosperity of the railways. After considering the effects the "carry-back" provisions of the tax law, he declared that, "certainly during 1946 there isn't any amount of money that this board could, within reason, think of recommending that wouldn't be paid for out of the 'carry-backs' rather than out of any deficit for the railroads, because the industry has to its credit well over $1½ billion, or more, in excess profits tax paid in 1945 and 1944, and on which they are drawing wherever they can for other purposes, so that there is no question but what any justifiable wage increase will not cost the carriers anything in 1946."

Dr. Julius H. Parmelee, director, Bureau of Railway Economics, Association of American Railroads, took the stand as the initial carrier witness. He said, "The principal post-war concern of the railroads, in the next two or three years is centered on the volume of traffic that they can obtain and the cost levels at which that traffic can be handled; and inasmuch as costs in the railroad industry consist to such a large extent of wage rates and payrolls, the question of wages, of course, becomes of considerable importance."

Discussing the effects of the recent war on railway traffic, Dr. Parmelee said that the all-time high in freight traffic was reached in 1944, while in 1945 there was a moderate decrease of 1.3 per cent in freight ton-miles handled during the first seven months, as compared with 1944, and a decrease of 16.6 per cent during the last five months, with the average decrease for the year being 7.6 per cent. For 1946, he said, the preliminary figures show a decline of 15.4 per cent during January and February, as compared with the same period of 1945.

Post-War Traffic—Dr. Parmelee said that the research staff of the Interstate

turn, Dr. Parmelee said, was 5.24 per cent on investment in 1917, averaged 4.49 per cent from 1921 to 1930, 2.22 per cent from 1931 to 1940, and 5.26 per cent from 1941 to 1944. For 1945, he estimated that the rate of return on investment after depreciation would be 3.78 per cent. Dr. Parmelee also directed the board's attention to a comparison of net railway operating income and traffic in 1929, the pre-war traffic peak, with those of 1944, pointing out that in 1944, operating revenues were 50 per cent greater than in 1929, while net railway operating income was 12 per cent less in 1944 than in 1929.

As he did in the two arbitration cases, which were concluded last week, Dr. Parmelee restated the operating results for 1941 in terms of present wages, not including the requested increases under discussion before the emergency board and present costs of materials and supplies. According to his calculations, if the railroads were to again handle the 1941 traffic, at 1941 rates, the net results of their operations would be a deficit of $255 million, instead of an income of $500 million, which they actually earned in 1941.

Forecasts 1946 Results—For 1946, Dr. Parmelee forecast freight revenues of $5.1 billion, passenger revenues of $1.2 billion and other revenues of $500 million, for a total revenue of $6.8 billion for the year. Freight service expenses he estimated will amount to $3.9 billion in 1946, and passenger service expenses $1.3 billion, for total expenses of $5.2 billion forecast for 1946, with a probable operating ratio of 86.7 per cent. Dr. Parmelee estimated that taxes in 1946 would total $685 million, comprising $210 million of payroll taxes, $190 million of federal income taxes and $285 million of other taxes. Equipment and joint facility rentals, he said, would amount to $165 million, so that a net railway operating income of $750 million could be expected in 1946. After allowing for other income and fixed and contingent charges, Dr. Parmelee's final estimate for 1946 results, based on current wages and prices, is a net income of $330 million.

Dr. Parmelee's testimony was concluded on March 27, at which time he told the board that freight service costs per thousand revenue ton-miles had showed an almost continuous decline from 1921 to 1933, then began to rise in a somewhat irregular manner until it reached $6.78 in 1938, then fell to a low of $5.56 in 1942. Since 1942 freight service costs, in spite of increased

cars, 1,000 locomotives and 1,000 passenger cars per year. In addition he thought that $300 million per year should be spent on the fixed property for each of the next five years. Dr. Parmelee also estimated the future revenue needs of the carriers, which he said should average, in net railway operating income, about $1 billion annually, made up of $535 million for fixed and contingent charges, $265 million for improvements and $253 million for dividends, plus another $100 million for a moderate increase in dividends and certain additional improvements, less about $150 million income from outside investments.

Dr. Parmelee next presented statistics correlating wage increase with changes in the railway rate structure. It was significant, he said, that with only two exceptions, one between 1932 and 1934, and another from 1941 to date, that every change in railway wages had been followed by a corresponding change in charges to the public, subject to a time lag of several months before the rate changes can be made effective. "Generally speaking," he said, "increased costs of railroad operation, especially when they result from an increase in so large an element of costs as the payroll, are reflected in an increase in either freight charges or passenger fares, or both."

Dr. Parmelee also presented a discussion of the relationship of railway costs to net income. Using the carriers' estimate of freight revenues of $4,670 million for each of the three post-war years, and existing prices of materials and wage rates, Dr. Parmelee said that an increase of 17.1 per cent in freight rates would be required to hold net railway operating income to the level of 1941. If, he said, the $920 million annual cost of the wage demands now under consideration were added to this an additional freight rate increase of 19.7 per cent would become necessary, or a total increase of 36.8 per cent, but still giving no effect to the influence of the increase in material prices since January 1, 1946.

Can't Ignore Effect on Rates—"Regulation of freight rates and passenger fares is a function of the Interstate Commerce Commission, but this board cannot ignore the inevitable effect of a wage increase on rates. So called cost-price relationships operate as effectively in the railroad industry as in manufacturing or other forms of production," Dr. Parmelee declared.

He also presented an exhibit, which he

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

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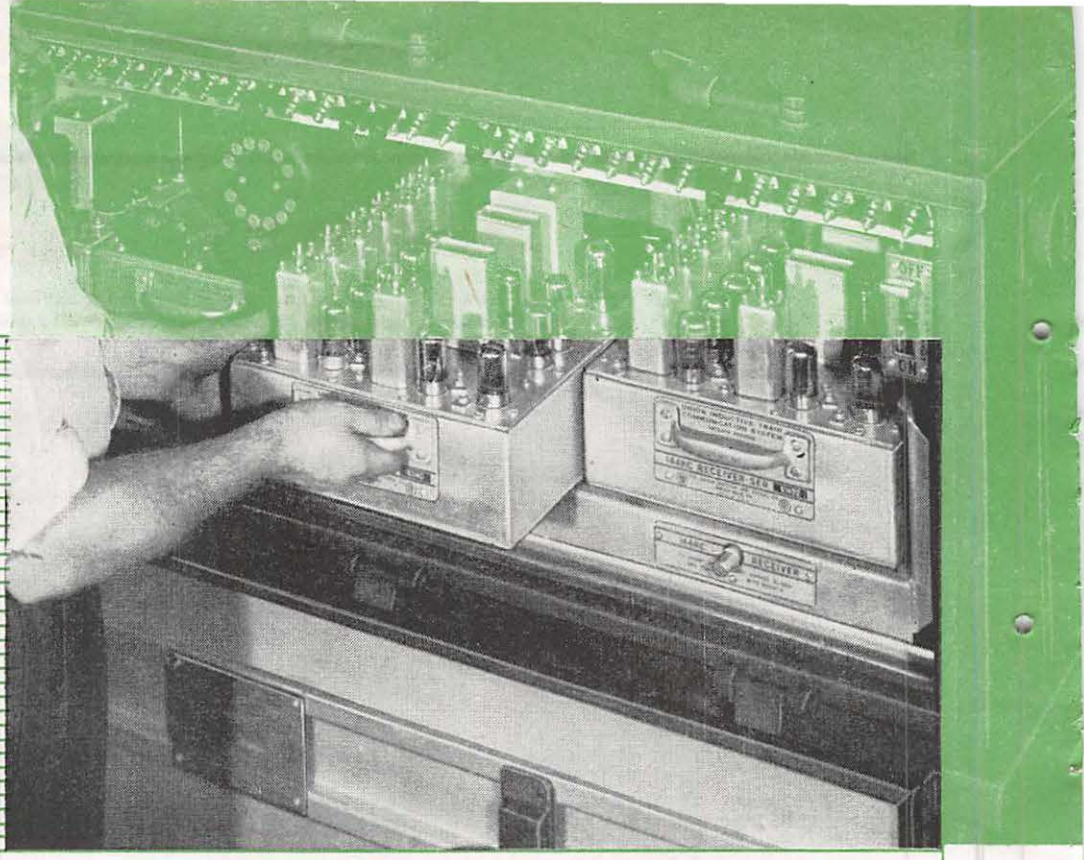

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The Week at a Glance

LEGITIMACY: This issue's leading editorial finds the general principle of *legitimacy* underlying the relations of railroads and all other large private business, alike with the general public and with their own employees. Originally singled out by analytical historians to explain some of the distempers from which European governments have suffered, this principle asserts that the stability of a government, or other social institution, is dependent upon the degree to which the general public accepts without question the powers the institution exercises. The application of the doctrine to the railroads and other large private enterprise rests on the fact that, in the minds of a vocal minority, "big business" under "finance capitalism" has tended to become "illegitimate," i. e., it is opposed by some people even when it is undeniably acting in the public interest—simply because such people have been led to believe that this *form* of business organization is essentially bad.

●

MANAGEMENT'S ERROR: The editorial follows through to a further finding that managements, themselves, have been responsible for the growth of this attitude of mind—because in times past they were too frequently content to plead the justice of their cause only in courts of law, meanwhile neglecting the "court of public opinion." If the railroads should succumb to socialization, it will not be because they are inefficiently operated, but because they have been inept in conducting their affairs as dominant public opinion demands that they be conducted; or because although their actual behavior is in the public interest, they are remiss or incompetent in making that fact known. Hence the establishment of a good reputation by the railroads, individually and collectively, is their most pressing problem as it is the central problem of all large-scale enterprise.

●

JANUARY PURCHASES: Class I roads in January spent $133,274,000 for fuel, materials and supplies (excluding equipment), according to estimates prepared by *Railway Age* from reports received from 66 carriers. This is four per cent in excess of the comparable total for January, 1945. January purchases of materials and supplies (excluding fuel) totaled $81,095,000, up one per cent from last year and 40 per cent above January, 1943. Average daily expenditures for manufactured products during this year's first month amounted to $2,616,000, indicating continued heavy-volume buying after allowance is made for price increases. The returns are further analyzed in a short article appearing in the feature section.

●

SPEED-UP: Many improvements in transcontinental and other train schedules are planned by western railroads for this year in addition to their participation in the through coast-to-coast sleeping-car services which were inaugurated on March 31. A feature article herein presents a comprehensive report of the contemplated improvements. They include restoration of numerous trains discontinued during the war, substantial reductions in the running time of daily non-extra-fare trains between Chicago and the Pacific Coast, and new streamlined train service to Mexico City from St. Louis.

●

AIDED BY C. T. C.: Joint operations of the Denver & Salt Lake and Denver & Rio Grande Western over the Moffat tunnel route have been greatly aided by the former's installation of centralized traffic control on 128 miles of its jointly-used line between Denver, Colo., and Orestod. There are now fewer double and compound train meets, higher average train speeds, a large saving in engine hours, improved passenger train performance, and other benefits. An illustrated feature article herein describes the installation.

●

TWO-MONTHS NET: The estimated net income of the Class I roads for this year's first two months, $60 million, was down nearly $16½ million from the comparable 1945 figure. Gross was off 16.6 per cent while operating expenses were down only 8.7 per cent. And the 2.98 per cent return for the 12 months ended with February was down nearly a point from the 3.89 per cent rate of the 12 months ended with February, 1945.

●

ARNALL BLAST: Georgia's Governor Arnall, who got his state's anti-trust complaint against 20 railroads before the Supreme Court, was in Washington again this week. He testified at three sessions of the Senate interstate commerce committee hearings on the Bulwinkle bill to stay the operation of anti-trust laws with respect to carrier rate-making procedures and other agreements if approved by the I. C. C. And he followed through with a call at the White House to ask President Truman to veto the bill if Congress should happen to pass it despite the Arnall protest. That protest, as reported in a news story herein, was up to the governor's advance billings. The A. A. R. and the "railroad lobby" were assailed in picturesque language, and Mr. Arnall was at no loss when it came to "explaining away" the virtually unanimous shipper support for the bill. The shippers, it seems, "are threatened by the railroads and are afraid to buck the economic power of the A. A. R." But still Committee Chairman Wheeler said that "chaotic conditions" would result if rate bureaus weren't permitted to prepare tariffs—though the senator does think the House-approved bill should be amended.

●

REVAMP PROBE: The Senate this week adopted the resolution authorizing its committee on interstate commerce to proceed with an investigation of conditions surrounding the operation and handling of railroads undergoing reorganization by trustees and receivers. The resolution was sponsored by the committee's chairman, Senator Wheeler of Montana, and Senator Reed of Kansas. It gives the committee power of subpoena and allows $5,000 for expenses of the probe.

ARBITRATION AWARDS: Wage increases of 16 cents an hour for non-operating employees and $1.28 cents per basic "day" for the participating ops were awarded this week by the two arbitration boards which considered the separate proceedings. Carrier spokesmen estimated that the awards will increase the annual payroll costs by $619 million—$584 million for the higher wages and $35 million for additional pension and unemployment payroll taxes. Although the boards' findings are binding, the parties nevertheless remain free to launch new proceedings immediately under the provisions of the Railway Labor Act. And the brothers, who had demanded twice as much as they got, have announced their intention to do so.

●

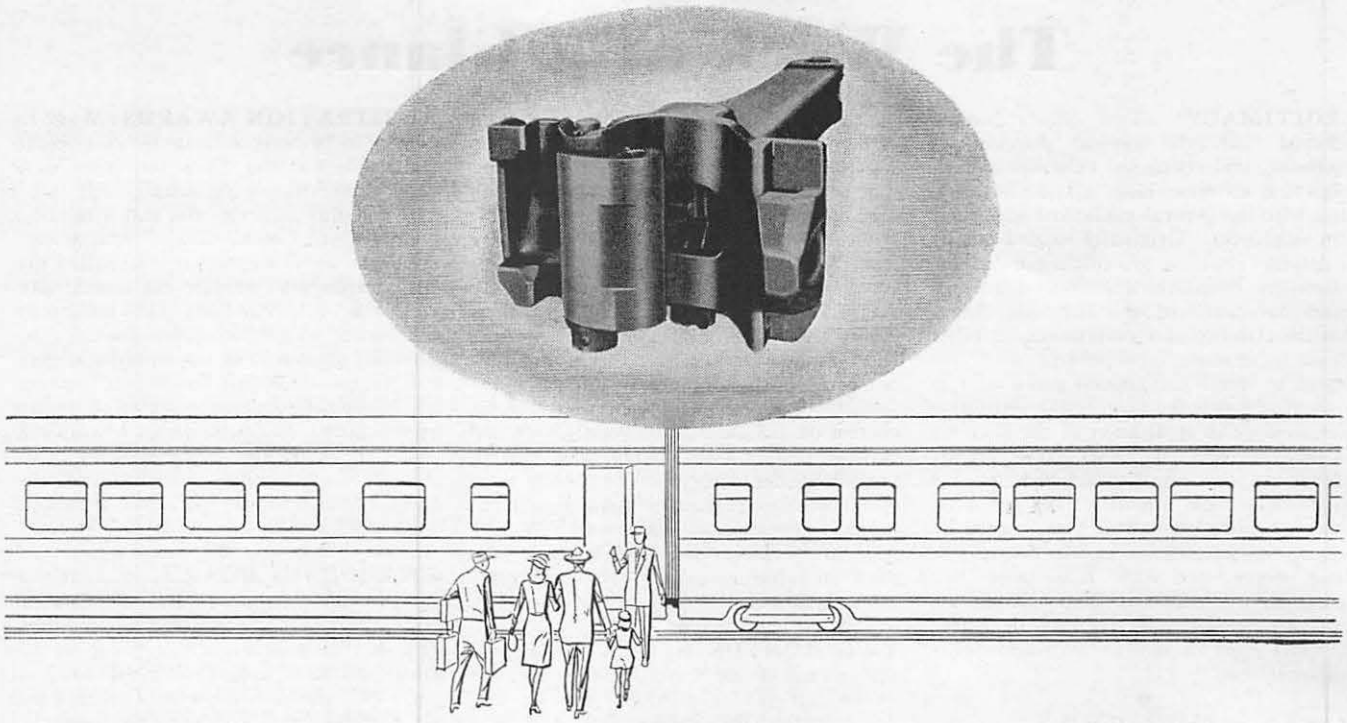
EMERGENCY BOARD: While the arbitration boards were thus winding up their assignments, the emergency board was still in the public-hearings phase of the wage and rules case involving demands of the Brotherhood of Railroad Trainmen and Brotherhood of Locomotive Engineers. At recent sessions, reported in a news story, the board heard the close of the unions' case and a number of management witnesses, including Dr. Julius H. Parmelee, who asserted that if all pending wage demands were granted on top of the increased costs of recent years, a freight-rate rise of 36.8 per cent would be required to hold net railway operating income to the level of 1941.

●

DIESEL SHOPS: The extensive facilities provided by the Santa Fe for servicing and repairing the Diesel-electric locomotives in road freight service on its Coast Lines not only represent the latest and most modern practices but also afford outstanding examples of the two general types of installations—those created by revamping existing steam locomotive facilities, and those of entirely new construction, designed and built specifically for their intended purpose. Part I of a two-part article describing these facilities is one of this issue's illustrated feature stories. After outlining the general set-up, it proceeds to its more detailed descriptions of alterations made at the Winslow, Ariz., engine terminal and the San Bernardino, Cal., shops to adapt them in turn to the handling and repairing of Diesel power.

●

WELDED COR-TEN HOPPER: The Carnegie-Illinois Steel Corporation unveiled at Roanoke, Va., this week an all-welded, lightweight, USS Cor-Ten hopper car of new design, developed by the Railroad Research Bureau of United States Steel Corporation subsidiaries after studies of the operating records of more than 65,000 freight cars in which Cor-Ten has been used since its introduction 11 years ago. The car is described in one of this issue's illustrated feature articles. In general it does not differ radically from the lines of the conventional A. A. R. standard hopper built of carbon steel; but there is a weight saving of 6,540 lb. which has been translated into additional capacity for revenue freight.



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RAILWAY AGE

Is Management "Illegitimate"?

There is a general principle underlying the relations of railroads and all other large private business, alike with the general public and with their own employees, which, if more widely recognized, should prove helpful to them in improving their public and employee relations. This principle is that of *legitimacy*. It was singled out originally by analytical historians to explain some of the distempers from which European governments have suffered during the past two hundred years. Briefly, this principle asserts that the stability of a government, or other social institution, is dependent upon the degree to which the general public accepts without question the powers the institution exercises.

An Institution Doesn't Thrive Under Attack

For example, until the 17th century in England and until the 18th and even the 19th centuries in the rest of Europe, there was hardly anyone who questioned the right of kings to rule, with little assistance from their subjects except advice. Where a government is thus generally accepted, whether its form be monarchic or popular, it can concentrate its attention on the business of government, and is not diverted by efforts to defend itself from being overthrown. Under such conditions of general acceptance a government will usually do as good a job as the capacities of its officials permit. If, however, there develops a considerable body of opinion in the country which thoroughly disapproves the *form* of a government, that government tends to become unstable and inefficient, since an undue proportion of its energy and attention have to be devoted to self-defense.

This principle of "legitimacy" serves to clarify Anglo-American history since Queen Elizabeth's time, and the history of the rest of Europe since the French revolution. Government by monarchal whim became "illegitimate" in the eyes of many if not most Britons during the mis-rule of the Stuarts; and the doctrine of "government by consent of the governed" replaced monarchic power as the test of legitimacy—although, with characteristic conservatism, the English retained the monarchic form after depriving it of its substance.

Most of the rest of Europe has not been so fortunate. In many parts of the Continent government by popular majorities, with protection of minorities, has not even yet become wholly "legitimate," and hence able to devote itself to the business of governing instead of diverting a large part of its attention to the suppression of those who would substitute another form of authority in its stead. Most of the turmoil in Europe in the past century and a half has resulted from conflict between people, on the one hand, who recognize as "legitimate" only those governments controlled by a popular electorate and, on the other hand, people who insist that a real government must be one dominated by an "élite." The conflict is bound to continue, according to the persuasive doctrine of "legitimacy," until one or the other faction dwindles to such small proportions that it no longer counts. Then and only then can Europe hope to quit fighting and get down to work again.

This doctrine has its application to the railroads and other large private enterprise in the fact that, in the minds of a vocal minority, "big business" under "finance capitalism" has tended to become "illegitimate." That is to say, it is opposed by some people even when it is undeniably acting in the public interest—simply because such people have been led to believe that this *form* of business organization is essentially bad. The lack of popular criticism of large salaries of movie actors and radio crooners, in contrast to the bitter resentment expressed in some quarters at the much smaller earnings of industrial executives for work of far greater importance in advancing the general standard of living, affords evidence of the distinction in the minds of many people between the rewards of effort and ability which are clearly personal and those which come as the result of corporate operations.

How Management Has Been Undermined

Managements of large enterprise have, themselves, been responsible for the growth of this unwholesome attitude of mind—because, in times past, they were too frequently content to plead the justice of their cause only in courts of law. If they could establish the rectitude of their efforts in these courts, their failure to convince the "court of public opinion" of their virtue, caused them small concern. They failed to reckon that, eventually, the law courts would respond to public opinion, which is the court of last resort where all institutions, be they governmental or economic, have to stand trial. To count on receiving eventual justice from public opinion, an institution and its officers not only must behave in a manner calculated to win approval but they must let it be generally known that they are actually acting in that manner.

There have been, from time to time, abuses in the management of some railroads, particularly their financial management, and when these are brought to light, it is not the reputations merely of those who have done evil which suffer but those of the management of the industry as a whole. This is particularly true when good deeds are given no publicity and the far rarer instances of misbehavior are sensationalized.

If the railroads should succumb to socialization, it will not be because they are inefficiently operated or because their legal, traffic and technical departments are not skilfully managed but because they have been inept in conducting their affairs as dominant public opinion demands that they be conducted; or because, although their actual behavior is in the public interest, they are remiss or incompetent in making that fact generally known. A reputation for rectitude cannot be attained merely by trying to refute repeated charges of misbehavior. A man can be said really to enjoy a good reputation, not when he has continually to press suits for slander against detractors but when his rectitude is so well recognized that accusers can find no one who will believe them.

The establishment of such a reputation by the railroads, individually and collectively, is their most pressing problem—embracing but not excluding all their lesser problems. It is also the central problem of all large-scale enterprise—and of the labor unions as well, although the unions show no indication whatever of concern about the matter. Like the managements of large industry of a generation or two ago, they feel that if the courts and the legislatures are, temporarily, with them, it matters little what the "court of public opinion" may think.

Diesel Saturation

Some railroads have indicated that all of their motive power purchases in the future will be Diesel-electric locomotives. This decision is based, apparently, on the favorable performance records this type of motive power has made in comparison with that of steam locomotives and because of the advantage the Diesel-electric locomotive has in the relation of horsepower to wheel loads, a characteristic that makes it particularly adaptable for those railroads whose track structures cannot carry the wheel loads of steam locomotives of comparable horsepower unless major and expensive changes are made.

Weight and horsepower ratios can be determined accurately. Data on locomotive performance must be studied and evaluated. Recent data have shown that as the proportion of Diesel-electric to steam locomotives increases there is an increase in the pounds of coal per thousand gross ton-miles consumed by the steam locomotives. This increase in fuel consumption is indicative of the unfavorable conditions under which the steam locomotives are compared.

The high availability of the Diesel and its greater initial cost have resulted in its being given preferred handling—by assigning this type of motive power to those trains that permit the greatest possible use to be made of the Diesel's availability. In doing so the steam locomotives have been required to pull a greater portion of the tonnage that moves under operating conditions less favorable to motive power performance. This portion of the tonnage does not even allow maximum utilization to be made of the availability of the steam locomotive.

It is obvious that, as the inventory of Diesel locomotives is increased, particularly in a program aimed at complete Dieselization, this type of motive power must assume a proportion of the traffic that will adversely affect its own performance. The ultimate result of such a program would be the need for Diesel locomotives as stand-by power to take care of the peak traffic loads for which no regular assignment at other times could be found—a service now furnished by steam locomotives. The Diesel would have to do the "dirty work" and could no longer be assigned only the "cream" of the traffic.

The fact that a small percentage of Diesel-electrics may now be showing a large saving does not prove that the replacement of all steam locomotives by Diesel-electrics will continue to give the same proportionate results. To the contrary, recent data indicate that there is a saturation point in the ratio of Diesel-electric to steam locomotives beyond which the Diesel-electric operation may show no savings in comparison to steam locomotives.

Not All Engineering

Some of the most important responsibilities of railway engineering officers have to do with matters entirely beyond those involved in maintaining, renewing and improving the fixed properties. One of these extra-curricular responsibilities that is assuming increased importance today is that of protecting the railroads from unreasonable or inequitable expenses in connection with alterations to their properties demanded or required primarily for the benefit of others.

In many quarters the railroads are considered legitimate game, with no closed season, wherever there is a financial burden to be borne for which some excuse, no matter how flimsy or unwarranted, can be found to force them to carry the lion's share. Probably the most noteworthy manifestation of this attitude for many years, from the engineer's point of view, was the policy of requiring railroads to pay 50 per cent or more of the cost of separating railroad-highway grades at crossings, notwithstanding the fact that in the great majority of cases these projects resulted in only minor benefits to the railroads. Such depredations of railroad treasuries constituted a favorite pastime of the politicians until, at length, the near exhaustion of railroad finances deprived them in some degree of this diversion. Action by courts recognizing the need of some protection for the railroads and an increase in public enlightenment on the grade-crossing problem were also helpful.

While considerable progress has thus been made toward the elimination of inequities in the apportionment of grade-crossing elimination costs, railroad engineering officers cannot afford to relax their vigilance in this sphere, because grade crossings are not the only avenue for attack on railroad resources. This general problem was discussed by B. H. Prater, chief engineer, Union Pacific, in an address before the Western Railway Club at Chicago on March 18, in which he mentioned the new impetus that flood control and related projects have received since the end of the war. He pointed out that, where the relocation of railroad lines is involved, "vigilance will be required . . . to see that the money required for such changes is provided without direct expense to the railroad."

Mr. Prater also referred to the fact that the United

States Public Health Service "has become very active in its insistence that many improvements and modifications be made in existing facilities for watering passenger cars," pointing out that the cost to the railroads of making the changes insisted upon would run "into large figures at many locations."

There are other such coercive expenditures which are being urged upon the railways. For instance, the question has arisen of how the cost of maintaining grade-separation structures is to be shared, and there is also the related matter of increased taxes which are so frequently an aftermath of grade-separation projects. Still other sources of considerable expense in the aggregate are the many improvements involving railroad property that are constantly being sought by local groups, such as chambers of commerce, whose objective is benefits for themselves and the public rather than for the railroads. Not to be overlooked, either, are the expenditures involved in renewing or altering bridges across navigable streams where such work is required in behalf of water-borne traffic.

Supreme Court and Adjustment Board

On March 25, 1946, the Supreme Court of the United States rendered an opinion reaffirming the stand it took last fall in 325 U.S. 711 (the E. J. & E. case) involving the authorization required from employees to enable labor unions to represent them before the National Railroad Adjustment Board. After a half-hearted attempt to conform with the original decision, the unions announced that they could not handle cases before the Board under the "ham-stringing" terms of the Court's prescription; and the Board ceased to function so far as labor participation was concerned. The unions demanded and got a rehearing from the Supreme Court; but the original decision stands.

The Court expressed astonishment at the unions' attitude in a footnote to its current decision, as follows:

". . . it is altogether possible for the union to secure authority in these respects within well established rules relating to unincorporated organizations and their relations with their members, by appropriate provisions in their by-laws, constitution or other governing regulations, as well as by usage or custom. There was nothing to the contrary in our former opinion. We only ruled that on the showing made in this respect, which included controverted issues concerning the meaning applicability of the union's regulations, and the effects of custom and usage, we could not say as a matter of law that the disputed authority had been given."

According to Justice Frankfurter, in a somewhat caustic dissenting opinion, the Brotherhoods of Locomotive Engineers and of Railroad Trainmen summarized the effects of the Court's decision in part as follows:

"The shutting down of the Adjustment Board because of the difficulty or the impossibility of securing authorizations is only one development of the decision. We are advised that some managements are insisting that local chairmen furnish powers of attorney in day to day adjustments. Considering the various factors involved, such as the volume of the grievances, the extra burden placed on the committees, and the additional delays which would be encountered, the task of compliance with the technique required by the Court's decision seems calculated to cause a breakdown of grievance handling by employee representatives. It is obvious that handling by individuals or on an individual basis will not work. Such a breakdown, or even the impairment of collective handling as traditionally practiced, will be serious, as prior history shows."

It is unfortunate that this decision comes at a time when there is already some turbulence in management-labor relations as a result of the wage disputes being considered by arbitration and "emergency" boards. The National Railroad Adjustment Board has functioned over many years. Before the virtual cessation of its work, it had an unwieldy accumulation of cases still to be heard. But an unreleased report, presumably suggesting "streamlining" of the procedure and means of bringing the Board's activities up to date, had been prepared by E. J. Connors at the request of the President of the United States. In its long history, the Board's decisions required the railways to pay employees many millions of dollars for work not done. A recent case on one railroad involved a penalty settlement of $3 million. On the other hand, railway labor is never penalized by the Board. The best decision that railway management could possibly get in any case was for maintenance of the *status quo*.

It is too early to predict whether the unions and union members of the Board will continue their policy of non-cooperation. Already there have been sporadic threats of strikes as a result of delays in the disposition of employees' claims. The opinion of the Supreme Court is clear, however, and will be the law of the land unless, as may happen, Congress may seek to clarify the situation by further legislation.

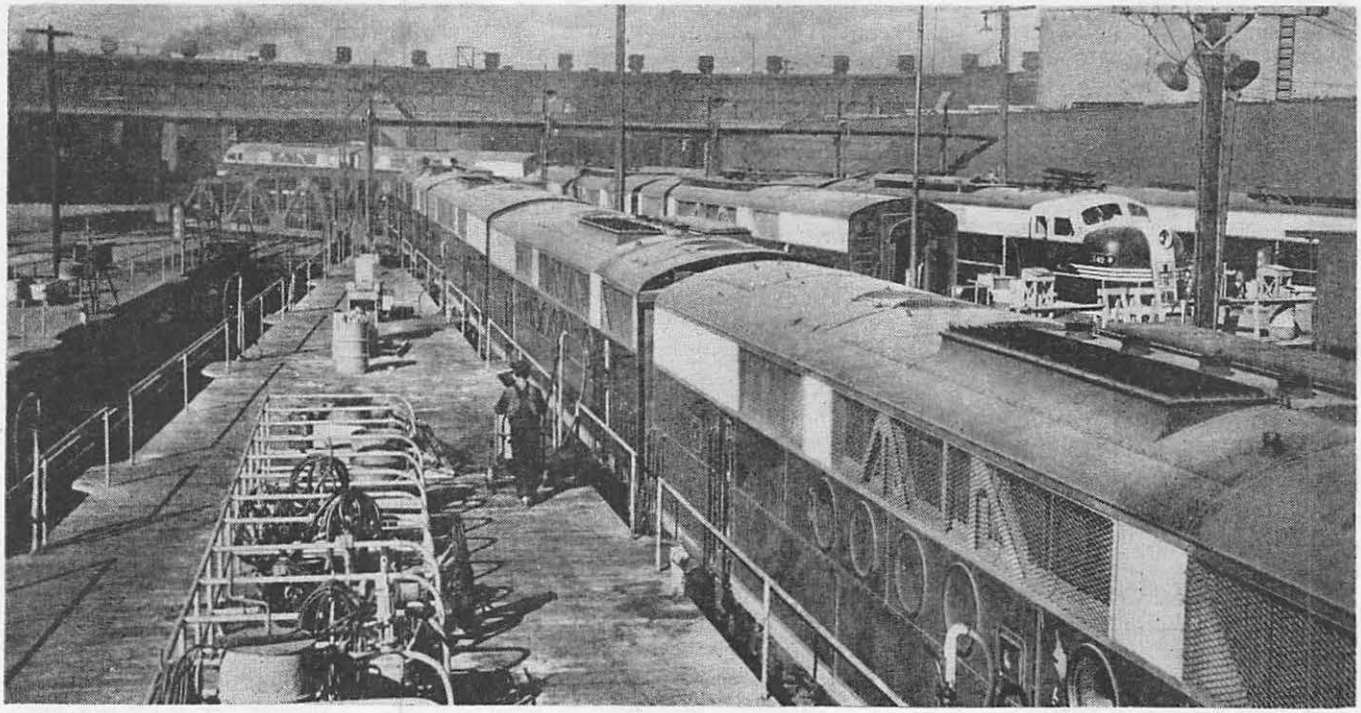
Needed—a National Policy to Promote Economy in Transportation

I am not criticising the policy of providing waterways, airways and highways at public expense, but these publicly provided facilities are also used for the business of commercial transportation—which is no more public in its nature than is the business of a railroad company —without requiring adequate charges for the use of public property for private profit.

The effect of such a policy is to shift more and more of the resources of the nation from the category of tax-paying property to tax-free property upon which taxes must be spent. Taxpayers in general have a direct interest in this increasing tendency to shrink the tax base upon which the support of government depends, and so to add to their own necessary tax payments.

The service rendered by railroads is public service, even though American experience has shown that it can be rendered best by privately operated business enterprise. In rendering that service, railroads are expected to—and do—bear all their own costs, and in addition pay real taxes besides. Under present-day policies they are in direct competition with other commercial transportation enterprises which are not subject to the same exacting requirements.

—From an Address by J. J. Pelley, President, A. A. R. to the Omaha Chamber of Commerce



All photographs courtesy Atchison, Topeka & Santa Fe.

Part of the outdoor Diesel servicing facilities at Winslow, Ariz., with the turntable and enginehouse in the background

Diesel Shops on Santa Fe Coast Lines

Extensive facilities provided for repairing and servicing freight locomotives operating primarily between Winslow, Ariz., and Barstow, Cal., 459 miles

Part I

DIESEL-ELECTRIC locomotives in road freight service on the Coast Lines of the Atchison, Topeka & Santa Fe are being serviced and repaired with the aid of facilities that represent the latest and most modern practices and equipment. The facilities on these lines, moreover, afford outstanding examples of the two general types of installations that have come into use for this purpose, namely, (1) those created by revamping existing facilities for steam locomotives as necessary to adapt them to the needs of Diesel power, and (2) those of entirely new construction, designed and built specifically for their intended purpose.

A Difficult Territory

Diesel freight locomotives were first placed in operation on the Coast Lines in the territory between Winslow, Ariz., and Barstow, Cal., a double-track section of line 459 miles long, which is a link in the company's route between Chicago and the Pacific coast. This territory is one of heavy grades, and prior to the use of Diesel power considerable double-heading was required in both directions. Also, the territory traversed is desert country where it has always been difficult to supply the larger than normal quantities of water required for steam operation. Finally, a rapid growth was occurring in the volume of traffic handled, with the result that the operating difficulties mentioned were becoming increasingly onerous.

The full significance of the combination of heavy grades, scarcity of water and increasing traffic can be realized by visualizing the relationship of the Winslow-Barstow territory to the Santa Fe System as a whole. Eastward from Winslow the double-track line extends across Arizona and New Mexico on relatively easy grades to Dalies, N. M., where connection is made with the company's network of lines extending eastward to Chicago and southward to the Gulf of Mexico at Galveston, Tex. Barstow, the westerly terminus of the territory, is a junction point in the main line of two divergent routes, one extending north to the San Francisco Bay area and the other southwest to Los Angeles and other points in Southern California. It is thus apparent that the Winslow-Barstow territory, with its difficult operating characteristics, was a vulnerable part of the connecting link between two networks of lines, especially during a period of rising traffic. Consequently, the problem of increasing the efficiency of operation in this territory became a matter of vital importance.

With these considerations in mind it was decided that an important improvement in operating results could be obtained by the use of Diesel-electric locomotives for hauling through freight trains between Winslow and Barstow. Locomotives of this type were first as-

signed to the territory in 1940, with further additions being made to the fleet until a total of 76 Diesel freight locomotives were plying between the two points. Subsequently some of the locomotives have been reassigned to other territories, particularly eastward from Winslow to Argentine (Kansas City), Kan., with the result that at the present time there are 50 of them in operation between Barstow and Winslow, although frequently these Diesels are also operated north of Barstow to Bakersfield, Cal., 141 miles, and southwest to San Bernardino, 81 miles. For instance, during the season when the movement of western fruit is at its peak, Diesel-drawn trains carrying this commodity are operated from Bakersfield to Winslow.

All the Diesel locomotives are four-unit, 5400-hp. engines, each of which is capable of handling between 3400 and 3500 tons in either direction over the entire district between Barstow and Winslow, except in a 23-mile section of 1.8 per cent grade eastbound, where helper service is still required. All through freight trains are now handled over this territory by the Diesel-electric power.

Servicing Facilities Needed

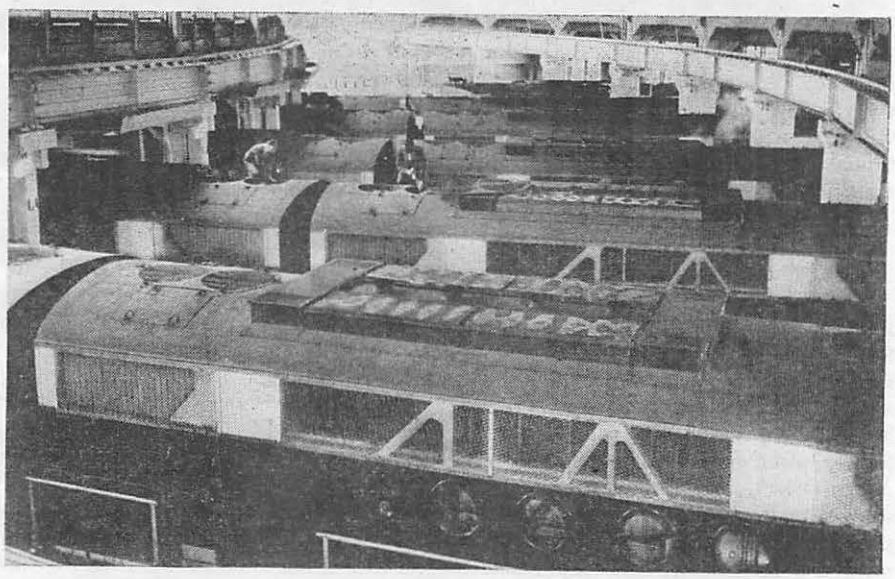
With the inauguration of Diesels in road freight service in the Winslow-Barstow territory the company was confronted with the problem of providing adequate facilities for servicing, inspecting and repairing this type of power. A decision regarding the character and location of permanent facilities for performing these functions was not made immediately, awaiting more definite knowledge of service requirements, but in the meantime it was decided to take care of current needs, in the way of servicing, inspection and light repairs, by taking over part of the existing enginehouse at Winslow and remodeling it for this purpose, and by making such other changes and additions at this point as might be found necessary.

Subsequently, it was decided to install the permanent facilities at Barstow and to create them in the form of a completely new layout especially designed for the purpose, including all the necessary facilities and accessories for inspecting and servicing the locomotives and for making light repairs to them. The inspection work contemplated for the shop at Barstow includes that of a periodic nature, such as is required at intervals of 2,000, 4,000, 6,000, 15,000 and 20,000 miles, as well as the monthly, quarterly and semi-annual inspections.

The main shop building and other facilities at Barstow are so arranged that, if it is considered desirable at any time in the future, they can be enlarged as necessary to permit heavy repairs to be made to the Diesel-electric locomotives at this location. However, for the time being at least, all heavy repairs, including those to traction motors, are being made at San Bernardino, where the principal locomotive repair shops of the Coast Lines are located. This means that the work of providing facilities for the handling of Diesels has included considerable alteration and construction work at the San Bernardino shops to adapt them to the requirements of this type of power.

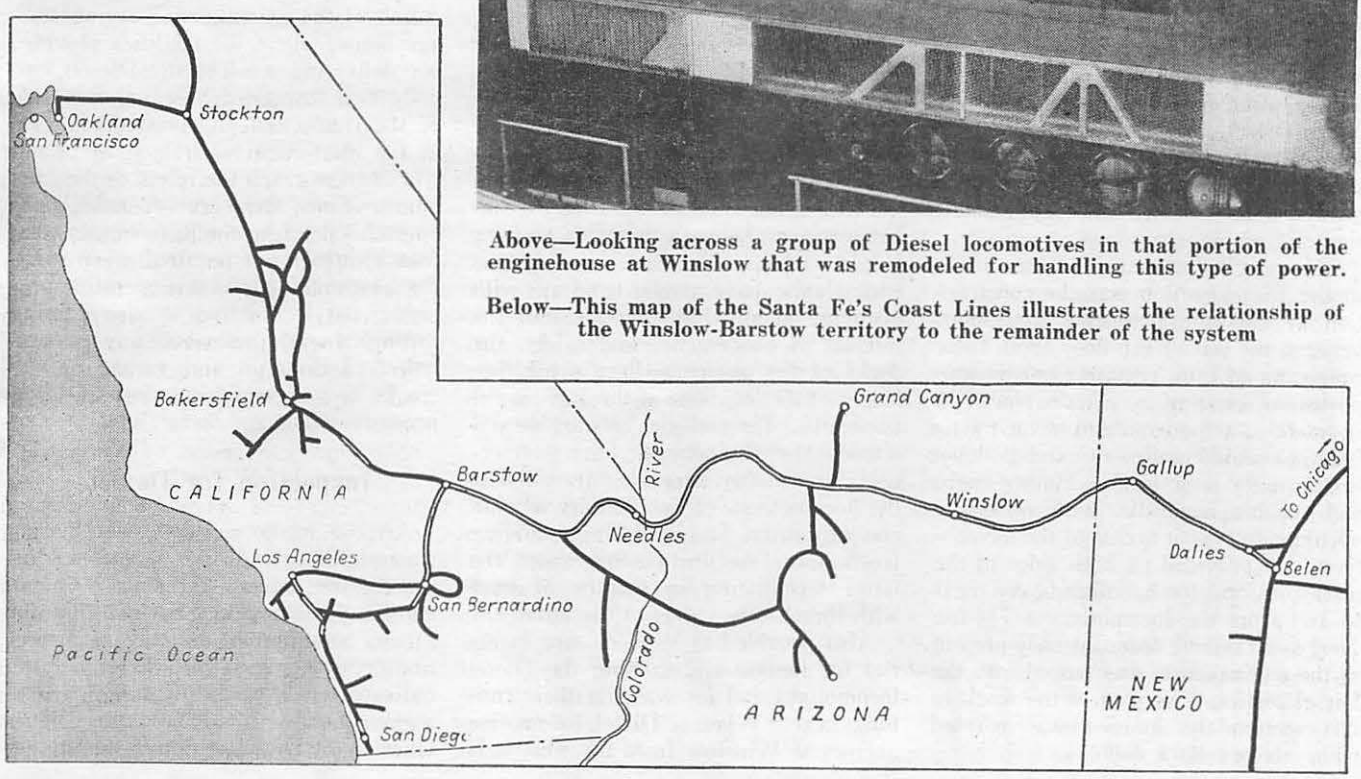
Fueling Facilities at Needles

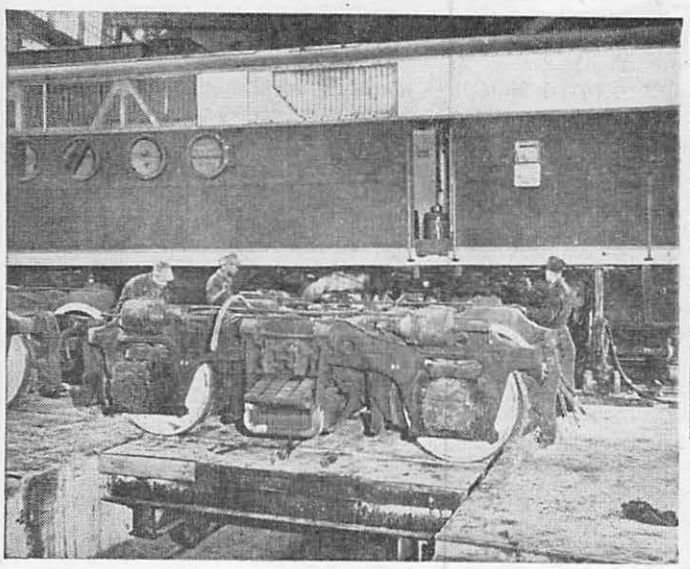
Aside from the changes at Winslow and San Bernardino and the construction of new facilities at Barstow, supplemental fueling facilities have been provided at Needles, Cal., a point 168 miles east of Barstow. These are primarily for the fueling of locomotives hauling fruit trains through from Bakersfield to Winslow, which must be stop-

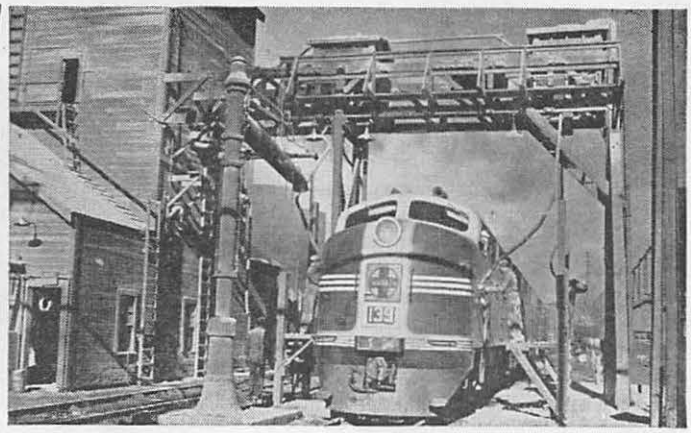


Above—Looking across a group of Diesel locomotives in that portion of the enginehouse at Winslow that was remodeled for handling this type of power.

Below—This map of the Santa Fe's Coast Lines illustrates the relationship of the Winslow-Barstow territory to the remainder of the system







Additional Facilities at Winslow.—Left, changing out a truck of a Diesel locomotive by means of the transfer table installed in the enginehouse for this purpose. Above, the facilities for sanding Diesel locomotives were built in connection with existing sand handling plant

ped at Needles to permit the cars to be re-iced.

The remainder of this installment will be devoted to a description of the alterations made in the existing engine-terminal facilities at Winslow to adapt them to the handling of Diesel power, and to the changes made at the San Bernardino shops to permit the making of heavy repairs to the Diesel locomotives at that point. Part II of the article will deal primarily with the new inspection and maintenance shop and related facilities built at Barstow.

Changes at Winslow

The existing enginehouse at Winslow has 35 stalls with 100-ft. pits. Nine of these were incorporated in the Diesel section of the structure, which was separated from the remainder of the house by a fire-resistant partition faced with gypsum board. The concrete pits in the Diesel section of the enginehouse were not altered materially, except that their floors were covered with metal grating to provide better working conditions for employees.

The principal structural change made in the Diesel section was the construction of concrete platforms continuous between the pits at cab-floor level, these consisting of 6-in. reinforced slabs supported on concrete cross-walls placed 10 ft. apart. At the front end of each platform a concrete stairway extends down to the main floor level. Timber curbs and tubular handrails, with necessary openings to permit access to the locomotives, are provided on both sides of the platforms, and for handling heavy parts to and from the locomotives a 7½-ton overhead traveling crane, already present in the enginehouse, was moved into the Diesel section. As part of the work in this section the interior was painted white above a dark dado.

At another point in the enginehouse, four of the existing stalls were set aside for use in changing out and making repairs to trucks, power wheels and traction motors. For changing out trucks a transfer table was installed, which was built especially for this purpose at the company's shops at Topeka, Kan. This table is used in conjunction with four 100-ton power-operated jacks for raising and supporting the locomotives to permit the trucks to be removed and replaced. A new 10-ton overhead traveling crane has been ordered and will be installed in the wheel and truck section of the enginehouse.

Aside from the work done on the interior of the enginehouse, a lean-to was built at one end to provide storage space and a room for cleaning engine parts, and six additional tracks for inspecting, repairing and servicing the Diesels were provided outside. Three of these tracks are of the same length as those in the enginehouse, and are without pits, while the other three are provided with concrete pits approximately 200 ft. long. All the outside tracks are served by timber platforms between them, at cab-floor height, which, like those inside the enginehouse, have tubular handrails with openings at suitable intervals. In the interest of convenience and safety, the decks of the platforms have projecting ledges at the locations of the gaps in the handrails. The facilities both inside and outside the enginehouse have connections at suitable intervals for draining the locomotives of lubricating oil and cooling water, and outlets for adding fresh oil and distilled cooling water, the latter terminating in lengths of hose with thumb-type valves at the nozzles.

Also provided at Winslow are facilities for fueling and sanding the Diesel locomotives and for washing their running gear. When a Diesel locomotive arrives at Winslow from the west it is detached from the train in the yards and then moved directly to the fueling station where it may be spotted on either of two tracks served by a concrete island platform 211 ft. long. To permit the fuel tanks on all four units of each locomotive to be filled simultaneously there are four fuel outlets at this station, each consisting of a length of hose provided with a gasoline-type pressure fuel nozzle. Also, the fueling station is so designed as to permit the tanks of all four units to be filled in about eight minutes. When not in use the fueling hose are kept in pits in the platform.

After being fueled the locomotive is moved on to a location where it is sanded and the running gear washed, in operations that are carried out simultaneously. The sanding station is at the location of the existing sand-drying storage house, where the facilities provided for delivering sand to the Diesels embody two suspended hose on each side of the track, and an elevated platform at the location of each hose to permit workmen to reach the inlets of the sand boxes. Since there are two sand boxes on each side of each unit, this means that four spottings are required when sanding a locomotive. As this operation proceeds, the locomotive is also passing through a wash rack where any accumulation of dirt, oil and grease on the trucks is removed by means of high-pressure steam and water jets.

Inspection for Defects

After a locomotive has been fueled, washed and provided with sand it is inspected for defects. If none is found, and if the locomotive is not due for further attention in the way of inspection or servicing, it goes directly to the outbound track ready for assignment to a westbound train. Otherwise it is taken to the Diesel section of the engine-

house or to one of the outside tracks to permit any necessary work to be carried out.

Storage Tanks

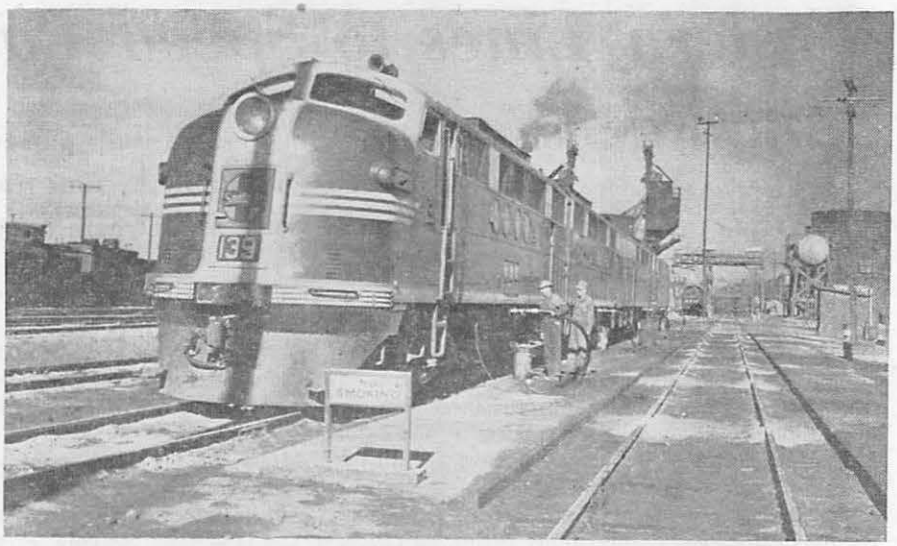
As part of the alterations required at Winslow it was necessary to provide storage facilities for the various commodities used. These include a 200,000-gal. delivery tank and a 55,000-bbl. storage tank for fuel oil; two 30,000-gal. storage tanks for new lubricating oil and one 20,000-gal. storage tank for reclaimed oil.

Another facility required at Winslow was a water-evaporating plant capable of supplying the large amount of distilled water needed for the cooling systems of the Diesel locomotives. This consists of a three-unit evaporator with a capacity for producing 20,000 gal. of distilled water per day. Heat for the evaporator is supplied in the form of steam from the existing terminal boiler plant. The entire operation of producing distilled water is controlled automatically, including the mixing of a soluble oil with the water in the proper proportions to render it non-corrosive. For the storage of distilled water two 8,000-gal. steel tanks have been provided.

Aside from the alterations and additions required at the Winslow terminal to adapt it to the handling of Diesel power, which were carried out early in the war, a considerable amount of other improvement work, such as the extension of existing tracks and the provision of new tracks, was performed at the yard at this point about the same time for the purpose of augmenting its capacity to handle the increase in business that was occurring at that time. As a result of this work there was a large influx of workers at Winslow, with requirements for housing far beyond existing accommodations. To cope with this situation, the railroad, through its own efforts and with the co-operation of the Federal Housing Authority, arranged for additional housing space to take care of approximately 2,000 people. Housing facilities provided by the railroad included 37 company cottages accommodating 44 families, auto trailer colonies consisting of 91 trailers, 26 prefabricated houses for imported Mexican workers, 2 converted parlor cars with 40 bunks for single men, a colony of 40 boxcar houses and a 24-apartment building for Laguna Indians, and the provision of 36 beds in the company's local reading room.

At San Bernardino

The alterations and improvements that were carried out at the company's shops at San Bernardino to adapt them to the work of overhauling and making heavy repairs to the Diesel locomotives consisted principally of certain changes in the existing boiler shop, the construction of a small building adjacent to the boiler shop for cleaning filters and other parts, and the construction of a new building around an existing crane runway to be used for repairing and overhauling traction motors shipped from Winslow and Barstow. In the boiler shop, seven of the existing pits and three tracks without pits at one end of the structure were set aside for use in making repairs to Diesel power, and, to compensate for the loss of pit space for handling steam locomotives, three additional pits were constructed elsewhere in the boiler shop for this purpose. Also, for the purpose of accommodating the paint shop, carpenter shop and truck-repair departments for steam locomotives, which were displaced from the boiler shop, a new structure in the form of a lean-to was built elsewhere in the shop area.



The Diesel fueling platform at Winslow is 211 ft. long and contains four outlets

Other Alterations

Two of the pits taken over in the boiler shop for handling Diesels were floored over and a room containing lye vats for cleaning engine parts was constructed over them. Elsewhere in the section of the shop taken over for handling Diesel power, elevated timber platforms, with their decks at cab-floor level, were constructed between the existing pits and between the tracks without pits. In addition, an adjacent corner of the boiler shop was remodeled and equipped as necessary to provide a shop for making repairs to Diesel engines and parts.

The structure built adjacent to the boiler shop for cleaning filters and other parts is partially open on the sides and is 44 ft. by 62 ft. in plan. It has a steel frame and a laminated wood roof deck covered with asbestos roofing, and contains a post crane of 2,000-lb. capacity for handling parts.

From a structural viewpoint, the building for repairing traction motors, being constructed around an existing crane runway, is the most interesting improvement made at the San Bernardino shops. The design and construction of this building, which is 44 ft. 3 in. by 142 ft. 6 in. in plan, reflect the material shortages that were in effect at the time it was built. Above a concrete curtain wall, the side and end walls are framed with wood covered with corrugated asbestos-cement sheets, except for large window areas on all sides, fitted with steel sash, that provide ample daylight illumination. The roof construction embodies timber trusses, with bow-shaped top chords, spanning between the side walls, and a deck consisting of timber sheathing covered with composition roofing. The floor is of wood blocks on a concrete base.

The existing crane runway, extending in an east and west direction, was 350 ft. long. The new building for repairing traction motors was placed at the west end of the runway, to which an extension about 40 ft. long, also enclosed in the building, was added. Hence, that part of the crane runway remaining outside the new building is about 250 ft. long, and, to permit the 7½-ton crane operating on the runway to move into or out of the building, a door opening, 8 ft. 5 in. deep and 39 ft. 4 in. wide, was provided in the east wall of the structure. The door enclosing this opening, which is manually operated by means of a chain hoist, is hinged at the top and has a frame of steel members covered with flat asbestos-cement sheets.

(Part II of this article will appear in a subsequent issue.)

Western Lines to Speed Passenger Trains

Drastic revisions in Western lines passenger trains are in prospect including many new trains, 48-hr. service to Pacific Coast and streamliner to Mexico

SUBSTANTIAL improvements in transcontinental and other train schedules are planned by western railroads for this year in addition to the inauguration of through coast to coast sleepers on March 31, which was reported in the *Railway Age* of March 23. Among the improvements contemplated are the restoration of numerous trains discontinued during the war, substantial reductions in the running time of the daily non-extra-fare trains between Chicago and the Pacific Coast, new streamlined train service to Mexico City from St. Louis, Mo., and from Chicago to Omaha, Neb., and to Los Angeles, Cal.

Daylights to Be Restored

On April 14, the Southern Pacific's noon Daylights will be restored to service between Los Angeles and San Francisco. Under their new schedules these streamliners will leave each terminal at 12:15 p.m. daily, arriving at the opposite terminal 9 hr. 40 min. later, at 9:55 p.m. The schedule of the morning Daylights running between these two cities will remain unchanged. Other Coast line train services will also be quickened, the southward "Coaster" leaving San Francisco at 7 p.m., 30 min. later than at present, and arriving at Los Angeles at 8 a.m., 35 min. earlier. Northbound this train will leave Los Angeles at 7:55 p.m., and arrive in San Francisco at 8:45 a.m., a reduction of 1 hr. 55 min. No. 72, the local passenger trains between these cities, will depart from San Francisco at 8:20 a.m., instead of 1 p.m., as at present, arriving at destination at 11:20 p.m., instead of 6:45 a.m. Northbound, this train will leave Los Angeles at 6:30 a.m., and arrive in San Francisco at 9:30 p.m. The nightly "Larks" between San Francisco and Los Angeles will continue to operate on their present schedules. Train No. 255, to Oakland, which connects with the Morning Daylight at San Jose, will be quickened so as to arrive in Oakland at 6:50 p.m., 30 min. earlier than at present. Trains No. 35 and 36, the Del Monte, running between Pacific Grove and San Francisco, will also have their running time reduced by 40 min., southward, and by 25 min., northward, on April 14.

On this date also, the Southern Pacific will make furtther drastic adjustments in its passenger train operations between San Francisco and Portland, Ore., and between Los Angeles and San Francisco and Portland, via the San Joaquin valley line. On that date trains No. 11 and 12, the coach, tourist-sleeper, deluxe, economy-type train, the "Beaver," will be restored between San Francisco and Portland, leaving each terminal at 5 p.m., and arriving, northward at Portland, at 11:45 a.m., the next day, and southward at San Francisco, at 11:50 a.m. At the same time trains No. 23 and 24, the Cascade, will become all-Pullman, and operate on greatly reduced schedules. Under the new time-tables No. 24 will leave San Francisco at 5 p.m., 1 hr. later than at present, and arrive at Portland at 11:30 a.m., 1 hr. 35 min. earlier, while No. 23 will leave Portland at 4:50 p.m., 30 min. earlier than now, and arrive at San Francisco at 11:20 a.m., 3 hr. 30 min. earlier.

Other Shasta route trains whose schedules are improved are No. 18, the Oregonian, which will leave San Francisco at 6:00 p.m., and arrive at Portland at 3:40 p.m., a reduction of 1 hr. 35 min., and its companion train No. 17, which will leave Portland at 10 p.m., as at present, and arrive in San Francisco at 7:20 p.m., 3 hr. earlier, while train No. 8, the Cascade's connection to Grant's Pass, Ore., will be speeded up so as to arrive at that station at 9:50 a.m., instead of 11:30 a.m. as formerly, and No. 7, the southward connection with the Cascade, will leave Grant's Pass at 4:30 p.m., 45 min. later than existing schedules; No. 20, the northbound Klamath, which is to be speeded by 1 hr. 25 min., and will leave San Francisco at 8:00 p.m., as now, with arrival in Portland scheduled for 9:25 p.m., instead of 10:50 p.m., while No. 19, the southward Klamath, will leave Portland at 8:15 a.m., 15 min. later, and arrive at San Francisco at 8:20 a.m., 2 hr. 30 min. earlier than under existing schedules.

Between Los Angeles and Portland trains Nos. 15-60 and 59-16, the West Coast, will also have their running times materially reduced. Southward this train will leave Portland at 10:15 p.m., 3 hr. 15 min. later than at present, arrive at Sacramento, Cal., at 7 p.m., 1 hr. later, and arrive at Los Angeles at 8:45 the second morning, 1 hr. 10 min. earlier. Northward, the West Coast will leave Los Angeles at 8:10 p.m., 15 min. earlier than existing schedules, arrive at Sacramento at 9:10 a.m., 10 min. earlier, and arrive at Portland at 7:40 a.m., 2 hr. 25 min. earlier.

S. P.'s San Joaquin Route

On the San Joaquin valley route between San Francisco and Los Angeles, April 14 will also bring about many quickened schedules. No. 52, the San Joaquin Daylight, will continue to depart from San Francisco at 8 a.m., but will arrive in Los Angeles at 7:40 p.m., instead of 10 p.m., as now operated. Northward this train will leave Los Angeles 30 min. later than now, at 8:30 a.m., and arrive at San Francisco at 8:30 p.m., 1 hr. earlier. No. 26, the southward Owl, will leave San Francisco at 5:30 p.m., 30 min. later, and arrive at Los Angeles at 8:15 a.m., 1 hr. 15 min. earlier, while northward No. 25 will leave Los Angeles at 5:30 p.m., 30 min. later than at present, and arrive at San Francisco at 8:20 a.m., 1 hr. earlier. No. 55, the San Joaquin valley line local train, will leave Los Angeles at 8:30 p.m., 5 min. later, arrive at Fresno at 8:30 a.m., 1 hr. 15 min. earlier, leave Fresno at 11:30 a.m., 1 hr. 15 min. later, and arrive at San Francisco at 7:20 p.m., 30 min. later. Southward its companion train, No. 56, will leave San Francisco at 11:30 a.m., 3 hr. later, and arrive at Los Angeles at 6 a.m. the next day, 15 min. earlier.

Schedules of trains Nos. 261 and 262, which connect with the San Joaquin Daylights at Modesto to provide daytime service between Los Angeles and Sacramento, will be adjusted to conform to the new time of the Daylights. No. 262 will leave Sacramento at 8 a.m., 40 min. earlier than at present, and arrive at Modesto at 10:40 a.m., 45 min. earlier, while No. 261 will leave Modesto at 5:35 p.m., 25 min. earlier, and arrive at Sacramento at 8:15 p.m., 55 min. earlier.

The Rock Island has also announced improved schedules for its Texas Rocket between Kansas City, Mo., and Ft. Worth, Texas, and Dallas, commencing on April 14. Through coaches will operate between Kansas City and Oklahoma City, Okla., and between Oklahoma City and Dallas in this train, these cars to be handled between Oklahoma City and El

Reno, Okla., in connecting trains. The new schedules call for this train to leave Kansas City at 9:15 a.m., 5 min. later than at present, arrive El Reno at 3:45 p.m., leave El Reno at 3:55 p.m., arrive Ft. Worth at 7:55 p.m., 1 hr. 30 min. earlier, and Dallas at 8:55 p.m., 1 hr. 35 min. earlier.

Northward the Texas Rocket will leave Dallas at 8:00 a.m., as at present, Ft. Worth at 8:45 a.m., 10 min. earlier, arrive El Reno at 12:35 p.m., depart El Reno at 12:45 p.m., 2 hr. earlier, arriving at Kansas City at 7:30 p.m., 2 hr. 30 min. earlier than now. Shuttle trains will handle the through coaches operating between Oklahoma City and Dallas and Kansas City between Oklahoma City and El Reno, where connections will be made with the main-line Texas Rockets in place of the present looping operation of the primary trains. Connections will be made at Kansas City with Rock Island trains to and from Chicago, Des Moines, Ia., and Minneapolis, Minn., and St. Paul.

Chicago-Pacific Coast Services

On June 2, the Rock Island, Southern Pacific, Union Pacific, and Chicago & North Western will reduce the running time of the present fast non-extra-fare trains, such as the Golden State Limited, San Francisco Overland Limited, Los Angeles Limited, Portland Rose and Sunset Limited, to approximately 49 hr., westward, and 48 hr., eastward. At the same time the latter three roads will trim approximately 2 hr. from the running time of the streamliners between Chicago and the Pacific Coast to 38¾ hr. and restore the coach-tourist car Challenger and Californian trains to their pre-war status. The City of Denver will also resume its pre-war schedule on that date, leaving each terminal at 5 p.m., daily, and arriving, westbound, at Denver at 8 a.m., and, eastbound, at Chicago at 9:35 a.m.

When the June 2 schedule changes become effective, the streamliners City of San Francisco, City of Los Angeles and City of Portland will leave Chicago at 7:30 p.m., 1 hr. 30 min. later than at present, and arrive at their respective destinations at 9:15 a.m., 30 min. earlier. Eastward these trains will leave their western terminals at 4:30 p.m. (except the City of Portland, which will leave at 4:40 p.m.), as at present, and arrive in Chicago at 10:15 a.m., 2 hr. earlier. The present all-Pullman San Francisco Overland Limited which is now operating between Chicago and Ogden, Utah, in consolidation with the all-Pullman Los Angeles Limited, and which handles, in addition, the standard sleeping cars of the Portland Rose between Chicago and Cheyenne, Wyo., will again be operated as a separate train, on a schedule more than 12 hr. faster than before.

The new San Francisco Overland Limited between Chicago and San Francisco via the C. & N. W.-U. P.-S. P. will consist of streamlined standard sleeping cars, coaches, and diner. A feature of the train will be the special dining-lounge car for coach passengers, serving low-priced meals, in addition to a standard diner. Westward the new train will leave Chicago at 3 p.m. and arrive at San Francisco at 2:20 p.m. the second day, for an elapsed time of 49 hr. 20 min. Eastward the run will require 48 hr. 30 min., with departure from San Francisco at 11:30 a.m. and arrival in Chicago at 2 p.m. the second day. Through sleeping cars between San Francisco and New York via both the Pennsylvania and the New York Central and between San Francisco and Washington, D. C., via the Pennsylvania, will be handled in this train.

A new train, which has not yet been named, will take the place of the present Los Angeles Limited and Portland Rose and, like the new San Francisco Overland Limited, will consist of streamlined standard sleepers, coaches and diner of both the regular and economy-lounge type. This train will operate westbound on a schedule 49 hr. 15 min. from Chicago to Los Angeles and 51 hr. 55 min. from Chicago to Portland. It will depart from Chicago at 3:05 p.m. daily and arrive at Los Angeles at 2:20 p.m. and at Portland at 5 p.m. the second day. Eastward this train will use 51 hr. 5 min. from Portland to Chicago and 48 hr. 20 min. from Los Angeles to Chicago. Departure from Portland will be at 9 a.m. daily and from Los Angeles at 11:45 a.m. daily, with arrivel at Chicago at 2:05 p.m. the second day. Through sleeping cars will be operated on this train between New York and Los Angeles in connection with both the Pennsylvania and the N. Y. C. .

Speedier Golden State Limited

The Rock Island-Southern Pacific likewise will establish similar service on June 2, when the Golden State Limited will be placed on a 49 hr. 15 min. schedule westbound with departure from Chicago tentatively set for 9:30 p.m. and arrival at Los Angeles at 8:45 p.m. the second day. Eastbound a 48 hr. 15 min. schedule has been arranged, leaving Los Angeles at 11:30 a.m. and arriving in Chicago at 1:45 p.m. the second day. The new Golden State Limited will handle through sleeping cars between New York and Los Angeles via both the N. Y. C. and the Pennsylvania, and will consist of streamlined sleepers, coaches, and both standard diner and economy type diner-lounge for coach passengers.

Features of the new westbound schedule of the Golden States are the morning departure from Kansas City which will permit the continued operation of the St. Louis-Los Angeles sleeper in connection with the Missouri Pacific's overnight "Missourian" between those points, and assures close connections with the Rock Island's overnight train to Kansas City from Minneapolis, St. Paul, and Des Moines; forenoon arrival at Arizona resorts in the vicinity of Tucson and Phoenix; and arrival in time for dinner at the California Palm Springs resort area. Eastbound the new schedule provides convenient departures from these resort areas and a convenient connection at Kansas City with the Missouri Pacific's streamlined Colorado Eagle, which will handle the Los Angeles-St. Louis sleeping car, and with the Rock Island's Twin Star Rocket for Des Moines, Minneapolis and St. Paul.

The Wabash and Union Pacific, on June 2, will likewise inaugurate 48-hr. service between St. Louis, Mo., and Pacific Coast cities with the establishment of a new train to be known as the City of St. Louis. This train will leave St. Louis at 3:30 p.m. daily via the Wabash, 20 min. earlier than the present train, arrive at Kansas City at 8:20 p.m., 55 min. earlier, where it will be delivered to the U. P. Arrival at Denver is scheduled for 6:45 a.m. the following morning, 8 hr. 50 min. earlier than under existing schedules. From Denver the train will proceed to Cheyenne where connections with the new Portland Rose, Los Angeles Limited and San Francisco Overland Limited will be made, giving arrival at Portland at 5 p.m., and at Los Angeles and San Francisco at 2:20 p.m., the second day. Eastbound the City of St. Louis will connect with these same trains giving 9 a.m. departure from Portland, 11:30 a.m. from San Francisco and 11:45 a.m. from Los Angeles. The City of St. Louis will leave Denver at 8:45 p.m., 5 hr. 5 min. later than the present through train, arrive in Kansas City at 8:35 a.m., 55 min. later, and arrive at St. Louis at 1:40 p.m., 1 hr. 33 min. earlier.

Equipment of the new City of St. Louis, which will be powered by Diesel-electric locomotives between St. Louis and Cheyenne, will consist of streamlined coaches, dining car and sleepers. Through sleeping cars will operate between St. Louis and San Francisco, as at present, and in addition between St. Louis and Los Angeles and Portland. During the initial period of operation there will be no through coaches from St. Louis to the West coast, coach passengers being required to change trains at Cheyenne. The tourist sleeping cars now being operated between St. Louis and San Francisco and between Kansas City and Los Angeles will be continued on other trains, but schedules have not yet been determined.

The benefits of 48 hr. service between the mid-west and California will not be confined to Chicago, St. Louis and the

Twin Cities, for on June 2 the Sunset Limited of the Southern Pacific, operating between New Orleans, La., and Los Angeles via Houston, Tex., San Antonio and El Paso, will be placed on a 47 hr. 55 min. schedule westbound and one of 49 hr. 45 min. eastbound. This train will depart from New Orleans at 11:30 a. m. daily, arriving at Los Angeles at 9:25 a.m. the second day. Eastbound the Sunset will leave Los Angeles at 12:30 p.m., and arrive in New Orleans at 4:15 p.m. the second day.

At the same time, the Argonaut will be scheduled to leave New Orleans at 11 p.m., as at present, but with arrival in Los Angeles at 7:30 a.m., the third day, 2 hr. 10 min. earlier than now, and making connections there with both the Morning Daylight via the Coast line and the San Joaquin Daylight via the San Joaquin valley line for San Francisco. Eastbound the Argonaut will depart from Los Angeles at 8:15 p.m., making connections with both Daylight trains from San Francisco, and 1 hr. 30 min. later than at present, and will arrive in New Orleans at 7:35 a.m. the third day, 2 hr. 55 min. earlier than at present. None of the 48-hr. trains between Chicago and New Orleans and Pacific Coast destinations will require payments of an extra fare.

Reconverted Californian

On the Golden State route, the Californian, which presently handles day coaches only, except between Chicago and Kansas City, will again become a deluxe, economy-type train, with streamline coaches, tourist sleepers, economy diner, full lounge car for tourist car passengers and stewardess-nurse and porter service. It will also revert to its pre-war schedules. Westward, the Californian will leave Chicago 8:45 p.m. daily, arriving in Los Angeles at 7 a.m. the third day; and eastbound it will leave Los Angeles at 8 p.m., with arrival in Chicago scheduled for 8:30 a.m. the third day. These trains will continue to handle through tourist sleeping cars between Chicago and San Diego and through deluxe coaches between Memphis, Tenn., and Los Angeles, via Little Rock, Ark., and Oklahoma City. To relieve the Golden State Limited and the Californian of head-end traffic, a solid mail and express train will be established by the Rock Island and Southern Pacific, operating daily in each direction between Chicago and Los Angeles and handling no passengers.

On the Overland route, the famous Challengers of the C. & N. W.—U. P.-S. P. between Chicago and San Francisco and Los Angeles will likewise return to pre-war schedules and standards on June 2. Westbound the new San Francisco Challenger will leave Chicago daily at 10 p.m., arriving in San Francisco at 8:20 a.m. the third morning, while Los Angeles Challenger will leave at 9:45 p.m. and arrive in Los Angeles at 7:00 a.m. Eastbound the San Francisco train will depart at 6:30 p.m., arriving in Chicago at 7:30 a.m., while the Los Angeles Challenger will leave at 8:30 p.m., with a 7:45 a.m. arrival in Chicago. The Pacific Limited, which now leaves Chicago at 10 a.m., with arrival at San Francisco at 6:50 a.m. the third day, will assume the approximate schedule of the existing San Francisco Overland Limited, and will depart from Chicago at 9:15 p.m. daily, arriving at 7:50 a.m. the third day. Eastbound this train will leave at 8:30 p.m., arriving in Chicago at 8:30 a.m. the third day.

The Los Angeles and Portland sections of the Pacific Limited will also be scheduled out of Chicago at 9:15 p.m., consolidated with the San Francisco section, and will arrive in Los Angeles at 7:10 a.m., the third day, and in Portland at 6:45 a.m. Eastbound this train will leave Portland at 9:30 p.m., and Los Angeles at 8:35 p.m., being handled into Chicago as a consolidated train with the San Francisco section, and arriving at 8:30 a.m. the third day. This train will handle through coaches and standard sleepers between Chicago and each of the three Pacific Coast cities. The tourist car and deluxe coaches now operating between Chicago and Portland in the Los Angeles Challenger to Cheyenne, Wyo., thence the Portland Rose, will continue to operate in the former train, but will be placed in the Portland section of the new Pacific Limited from Cheyenne when the June schedule changes become effective.

The Chicago, Burlington & Quincy will also reduce by one hour the time of its Denver Zephyr, operating daily between Chicago and Denver, Colo. Westbound this train will leave Chicago at 5:30 p.m., as at present, and arrive at Denver at 8:30 a.m., one hour earlier, for an elapsed running time of 16 hr. Eastbound the 15 hr. 35 min. schedule will provide for this train to leave Denver at 4 p.m., the same as now, but arrival in Chicago will be at 8:35 a.m., 1 hr. 5 min. earlier than at present. According to Burlington officials, the improved schedules of the Denver Zephyr will become effective this spring, but the exact date has not yet been determined.

Coast-to-Coast Services

As reported in the *Railway Age* of March 23, through coast to coast sleeping cars were started on March 31 between New York and Los Angeles and San Francisco and between Washington, D. C., and Los Angeles. Cars operating via the C. & N. W.-U. P. to Los Angeles and via these roads and the S. P. to San Francisco will leave New York in the Pennsylvania's Golden Arrow at 11:40 p.m., arriving in Chicago's Union Station at 4:40 p.m. and not in the Broadway Limited, as erroneously reported in that issue, while other cars for these cities leave New York in the New York Central's Iroquois at 11:30 p.m., arriving at LaSalle Street Station, Chicago, at 4:40 p.m. All of these cars are then transferred to the C. & N. W. Station, for departure in the all-Pullman San Francisco Overland Limited-Los Angeles Limited, leaving Chicago at 8:15 p.m. Arrival at San Francisco is at 9:20 a.m. the fourth day and at Los Angeles at 8:30 a.m.

Eastward, these cars leave Los Angeles at 5:30 p.m., and leave San Francisco at 7:00 p.m. in these same trains, arriving in Chicago at 8:30 a.m. the third day. One car each from Los Angeles and San Francisco is switched to the New York Central for handling in the Fifth Avenue Special, departing at 10:50 a.m., and arriving at New York at 7:45 the fourth morning, while one car from each of these cities is transferred to the Pennsylvania and handled from Chicago in that line's Manhattan Limited, leaving at 11:30 a.m., these latter cars arriving in New York at 7 a.m. the fourth day.

Since the above announcement was made, the Pennsylvania, C. & N. W., U. P., and S. P. have also placed a through sleeping car in service between Washington, D. C., and San Francisco. This car, which also began operation on March 31, is handled in the same trains as the other Pennsylvania coast-to-coast cars. It departs from Washington at 10:30 p.m. daily and arrives at that point at 7:20 a.m. daily. There will be no coast-to-coast sleeping cars operated in connection with the Rock Island-Southern Pacific Golden State Limited until that train's schedules are revised on June 2.

Through daily sleeping car service between Chicago and San Francisco via the Western Pacific, Denver & Rio Grande Western and Burlington to Chicago, thence the New York Central and the Pennsylvania, also began on March 31, when the first car left Oakland Pier (San Francisco) at 4 p.m. in the W. P.-D. & R. G. W.-C. B. & Q. Exposition Flyer. This car was due in Chicago at 11:55 a.m., April 2, where it was delivered to the N. Y. C., for handling to New York in that road's "Commodore Vanderbilt," leaving Chicago at 2:30 p.m. that day and arriving in New York at 9:30 a.m., April 3. This car is being operated on an every other day basis, with another car leaving Oakland Pier in the same trains on the alternate days and being handled from Chicago to New York in the General of the Pennsylvania, departing Chicago at 2:30 p.m., and arriving in New York at 9:30 a.m. Eastbound the first car over this route left New York on April 3 in the General at

4:05 p.m., arrived in Chicago at 8:50 a.m., departed on the Exposition Flyer at 12:35 p.m., and is due to arrive at Oakland Pier at 9:50 a.m., April 7. On alternate days this car is operated from New York to Chicago in the Commodore Vanderbilt of the N. Y. C., leaving New York at 4:15 p.m., and arriving in Chicago at 9:15 a.m. The schedule of these cars provides for evening departures and morning arrivals at Philadelphia, Pa., as well as New York; convenient daytime stops at several important Illinois and Iowa cities; late evening arrivals westbound at Omaha, Neb., and Lincoln and before midnight departure from Lincoln eastbound; and daytime arrivals and departures from both Denver, Colo., and Salt Lake City, Utah.

More Improvements in Prospect

Additional improvements in passenger train services on the western lines are in prospect for next fall when the Atchison, Topeka & Santa Fe will inaugurate daily service between Chicago and Los Angeles on the Super Chief and El Capitan in place of the present twice-weekly service. No change in the 39 hr. 45 min. schedule of these trains is contemplated at that time. When the changes in the Santa Fe's California service are made, it is also planned to extend that line's Diesel streamliners No. 11 and 12, now operating between Chicago and Tulsa, Okla., and Oklahoma City, to Ft. Worth, Dallas, Houston and Galveston. A 19-hr. schedule is contemplated to the north Texas cities and 25 hr. to south Texas. At the same time trains No. 5 and 6, the Ranger, will be completely re-equipped with lightweight stainless steel cars and Diesel locomotives and will operate on similar schedules, giving the Santa Fe both morning and evening departures from Chicago and morning and evening arrivals at north Texas cities and mid-morning arrival at Houston and Galveston.

The Rock Island also has announced that it has ordered equipment for additional streamliners, one 11-car train to operate tri-weekly between Chicago and Los Angeles in connection with the Southern Pacific on a schedule of 39¾ hr., and another to operate between Chicago and Omaha, Neb., as a fast day train. In addition, this road has placed orders for additional all-room sleeping cars for service on the Twin Star Rockets between Twin Cities and Houston.

Six new streamlined 12-car trains for daily service between Chicago and Seattle, Wash., and Tacoma, have also been announced by the Chicago, Milwaukee, St. Paul & Pacific. According to H. A. Scandrett, president of the road, the new trains will be placed in service shortly after the first of the year and will operate on a schedule of slightly more than 40 hr. Equipment of each train will consist of a Diesel-electric locomotive, mail car, baggage-dormitory car, four coaches, dining-car, recreation-lounge car, three sleeping cars and a compartment-drawing room, "Beaver Tail" observation car. When the new train is placed in service, the Milwaukee expects to continue the present Olympian to serve intermediate cities between Chicago and the Pacific Northwest.

A new streamliner in an entirely different territory and perhaps the first international streamliner in this country, if the Detroit section of the N. Y. C.'s Empire State Express which operates through Canada on its run from New York to Detroit, Mich., is excepted, is the new Aztec Eagle announced jointly by the Missouri Pacific and the National of Mexico. This train, which is to consist of new lightweight streamlined coaches, sleepers and dining-lounge car, powered by Diesel-electric locomotives, will be placed in service early next year between St. Louis, Mo., and Mexico, D. F., on a 45½-hr. schedule, 18¼ hr. faster than present through sleeping car service. The new train will leave St. Louis at 5:30 p.m. daily as a part of the Mop's new Sunshine Eagle, arriving at San Antonio at 11:20 a.m. the next day and at Mexico, D. F., at 3:30 p.m. the second day.

Less spectacular, but of equal importance, the western roads have not been neglecting their freight services. As long ago as October, 1945, the Texas & Pacific announced that it had restored all of its freight trains to pre-war schedules, including its famous 8-hr. meat train from Ft. Worth and Texarkana. On December 2, the Missouri-Kansas-Texas inaugurated faster "Comet" freight service between St. Louis and Texas points, leaving St. Louis at 8 p.m. daily, with arrival in Ft. Worth early the next evening and in Houston at 7 a.m. the second day, 24 hr. faster than any freight schedule operated before the war and 48 hr. faster than wartime services. Of even greater import than the changes outlined above was the restoration on March 21 of pre-war freight schedules between Chicago and St. Louis and Pacific coast points. The new schedules call for seventh morning deliveries in both directions between Chicago and all major Pacific coast destinations and between St. Louis, Mo., and points in the states of Oregon and Washington. Sixth morning deliveries between St. Louis and California points were established at the same time. Virtually all of the major western carriers participate in the new transcontinental schedules.

Material Purchases for January Maintain Strong Trend

RAILWAY purchases of materials, supplies and fuel (excluding equipment) by Class I roads continued heavy during the month of January and aggregated $133,274,000 or four per cent more than for the same month of 1945, according to estimates prepared by *Railway Age* and based upon individual reports received from 66 carriers.

Purchases of materials and supplies (excluding fuel) from manufacturers amounted to $81,095,000, an expenditure of one per cent more than for the month of January 1945, when they totaled $80,003,000; four per cent more than for January 1944 and 40 per cent greater than for January 1943. Average daily expenditures for manufactured products amounted to $2,616,000 during the first month of this year.

Although all comparisons must be tempered with due consideration for increases in unit prices, the continued heavy-volume buying on the part of the railways is well illustrated by their January purchases of all types of miscellaneous materials and supplies largely comprising stores stock. This classification includes all items for the maintenance of cars, locomotives, roadway and structures and January expenditures reached $70,979,000; three per cent more than for January 1945, nine per cent greater than for January 1944 and 45 per cent more than the same month of 1943.

Class I roads spent $52,179,000 for fuel during the month of January, fully eight per cent more than for the same month of 1945, four per cent more than January 1944 and 31 per cent more than in January 1943. Increased production from bituminous coal mines during the first month of 1945 accounted in large measure for larger coal deliveries to the railroads for their own use and this, coupled with reduced consumption, was reflected by increased coal inventories. According to the U. S. Bureau of Mines, Class I railroads had 27 days coal supply on hand at the end of January compared with 25 days' supply at the end of December 1945.

(Continued on page 724)

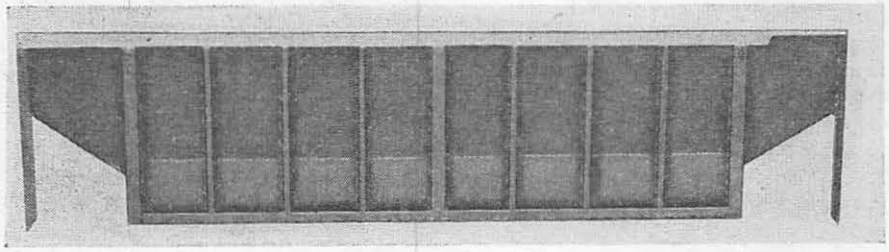
This Car Built Light with U·S·S COR-TEN STEEL
Weighs 3½ Tons Less Hauls 3½ Tons More
Turns Dead Weight into Dollars
USS COR-TEN
CIS
14500

USS Builds All-Welded Cor-Ten Hopper

Railroad Research Bureau design based on study of 65,000 Cor-Ten cars now in service—Outside frame and welded fabrication reduce opportunities for corrosion

IN THE 11 years since the introduction of USS Cor-Ten, car builders and railroads have used this steel in more than 65,000 freight cars with an average saving in dead weight of more than two and one-half tons per car. After studies of the operating records of these cars, the Railroad Research Bureau of United States Steel Corporation Subsidiaries presents an all-welded, lightweight USS Cor-Ten hopper car of new design for inspection by railroad officers and car builders. This car, built to order for Carnegie-Illinois Steel Corporation, was first shown at Roanoke, Va., on April 2 and 3, with subsequent appearances at other railroad centers. Of particular interest are the new types of joints embodied in the construction. These are all welded and simplify construction, provide tight seals against moisture, and eliminate laps.

When empty the new all-welded car weighs only 33,500 lb., a saving of 6,540 lb. over the A. A. R. standard hopper car built of carbon steel. This saving has been translated into increased cubic capacity, which allows more revenue freight each time the car is loaded. Because of its reduced weight, the car is equipped with empty-load brakes.



Outside elevation of a car-side subassembly

Comparative Weights and Dimensions of the USS All-Welded Cor-Ten Hopper Car and an A. A. R. Standard Carbon Steel Design

	USS Cor-Ten	A.A.R. Standard
Nominal capacity, lb.	100,000	100,000
Light weight, lb.*	33,500	40,040
Load limit, lb.	135,500	118,960
Journal size, in.	5½ x 10	5½ x 10
Inside length, ft.-in.	34—2	33—0
Inside width, ft.-in.	9—9 13/16	10—4
Height, ft.-in.	11—0	10—8
Cubic capacity, cu. ft.:		
Level	2,273	2,145
10-in. heap	2,553	2,408

* With One-Wear wrought-steel wheels.

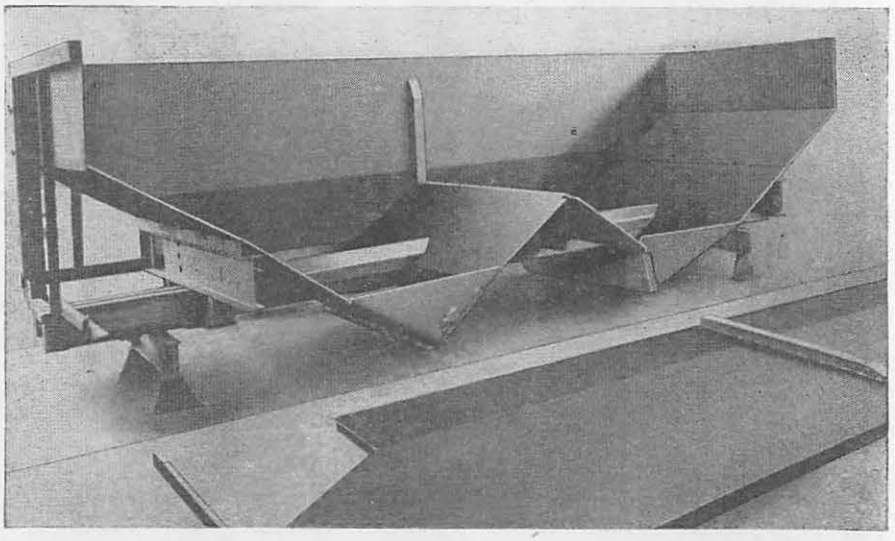
Principles of Design

In general, the car does not differ radically from the lines of the conventional A. A. R. standard design. For economy and simplification in fabrication, the use of standard sections and plates with straight trim and simple cold bends was one of the basic concepts of the design. Hot pressing and elaborate die

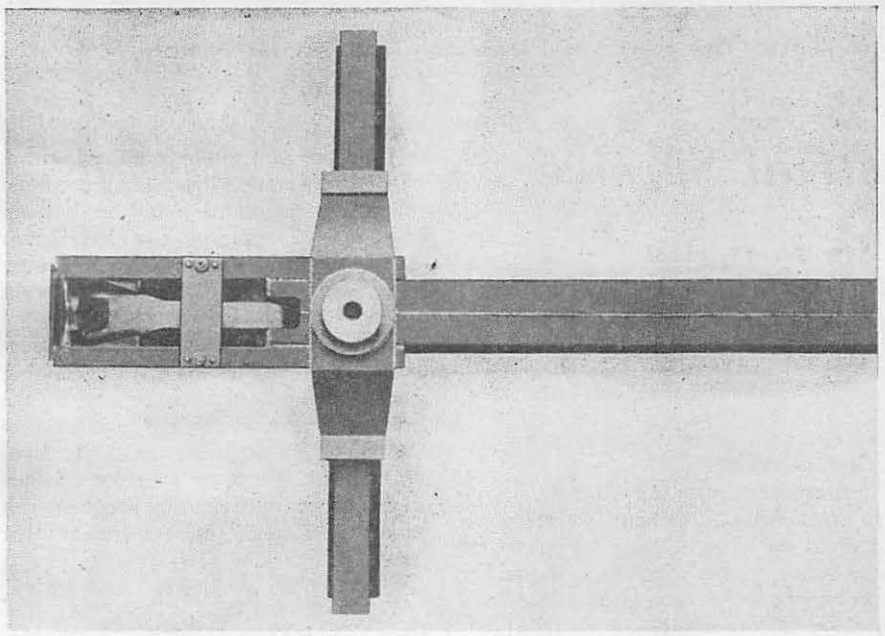
work were avoided. The car structure is designed for subassemblies which will facilitate assembly and permit position welding, these subassemblies of the under-frame, sides and ends, being all welded together in order to form the complete car.

Interior Unobstructed

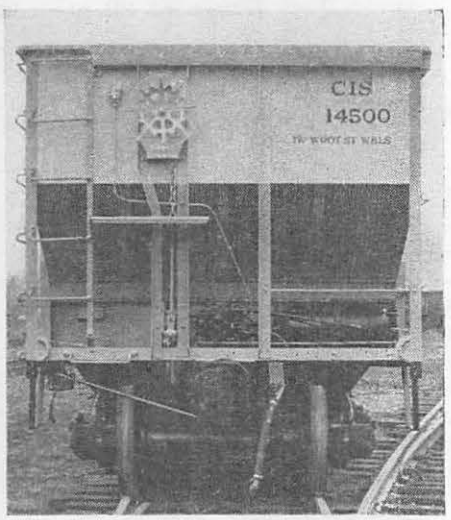
Protruding structural members and seam ledges have been eliminated from the interior of the car by means of outside stake side construction. This side framing has additional horizontal stiffness which compensates for the omission of the inside diagonal center braces. Such a smooth interior surface permits the free flow of lading when unloading and helps avoid damage to the car by mechanical devices used in unloading or loading. Ledges and pockets where moisture can collect are also eliminated, thus reducing the possibility of corrosive attack.



Above—The partially assembled car body shows the absence of interior ledges and seams. The remaining side on the shop floor is ready to be placed in position



Under side of the center sill and body bolster showing the backstops bearing directly on the end of the box-type sill



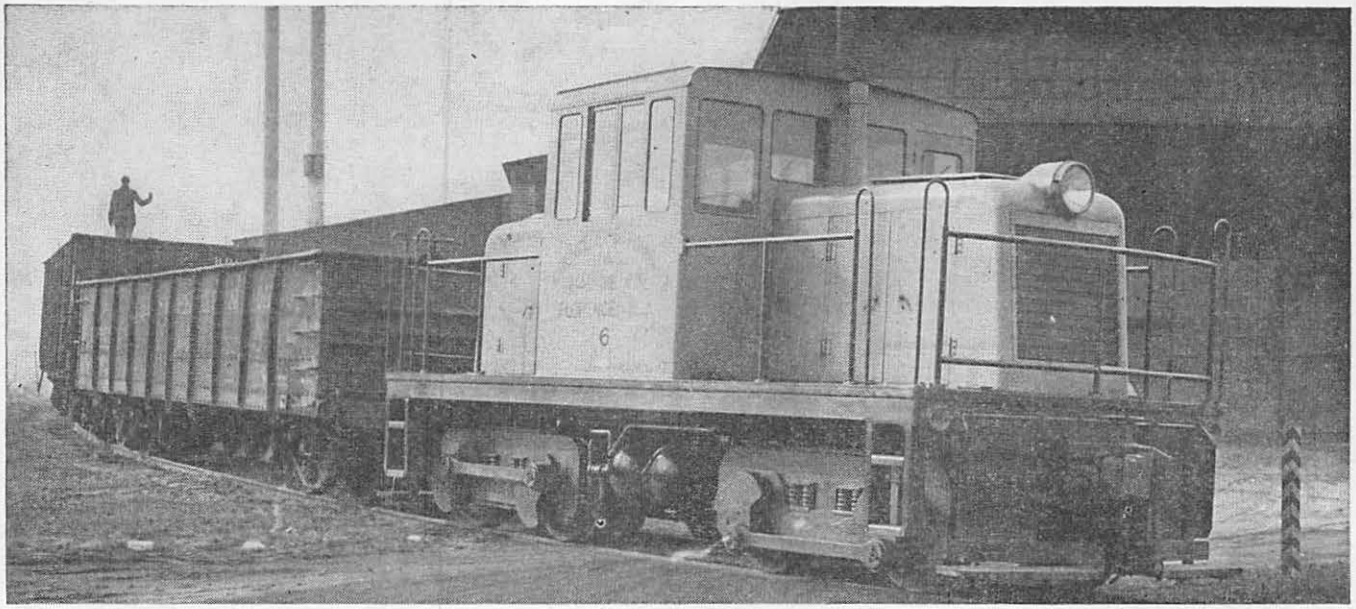
The hopper sheets are stiffened with three longitudinal braces

New Center Sill Employed

To obtain maximum unloading area in the hopper-door openings, and to reduce weight, a new welded tubular center sill has been used. This facilitates the use of a one-door opening across the car. The tubular center sill is terminated at the face ends of the draft-gear back stops with the face plates welded to the ends of the sill, thus transmitting the buffing forces directly to the full cross section of the center sill. Standard Z-26 draft sills extending from the bolster to the end of the car form a draft-gear pocket of standard dimensions. The draft sills are secured to the tubular center sill by welds which will develop strength equal to the full cross section of the sills, all welds running parallel to the line of stress.

The hopper sheet, which is formed by two simple cold bends, extends in one piece from one side of the car to the other. Its sloping sides engage and are welded to the corresponding slopes of the angles forming the bottom chords of the side girders. Specially designed longitudinal braces extending from the bolster to the end sheet assure stiffness. The body bolster is made up of a Carnegie wide-flange beam with a pressed-plate extension on the top flange to facilitate the connection to the sloping floor sheet and to provide a more yielding contact between the floor and the bolster.

Each side is a main subassembly. The side sheeting is made up of two longitudinal sheets, the heavier being in the lower portion, which encounters the greater wear and abuse. This heavier sheet extends from bolster to bolster and serves as a framing member for the attachment of all cross members and floor sheets. The upper sheet is of lighter gage and also extends from end to end of the car. These sheets are welded to a frame structure consisting of channel section vertical posts and top chord and an angle section side sill or bottom chord. The latter is inclined, forming a water-shedding shelf and providing the proper slope for the attachment of the hopper sheets.



Diesel-electric locomotive in service at the Florence Pipe Foundry and Machinery Company yards, Florence, N. J.

Diesels in Industrial Service

Fifty-ton switcher in New Jersey plant effects improvements in operation and return of 20 per cent on the investment

THE first six months' operations of a General Electric 50-ton, 300-hp. Diesel-electric locomotive at the Florence Pipe Foundry and Machine Company, at Florence, N. J., have resulted in savings that may approximate 20 per cent of the unit's cost by the end of its first year of service, according to a statement from the user. Other advantages, such as reduced fueling time, 100 per cent availability, ability to draw heavier loads, lessened maintenance, and improved working conditions for plant personnel were also announced.

The locomotive, which is used for switching duties, intra-plant handling of raw materials and finished products, and dumping slag, replaces a 55-ton three-axle, steam locomotive now held as a standby. It has never been used in that capacity, however, since the Diesel-electric was put into operation in July, 1945.

Most tangible and easily recognized savings made as a result of using the new locomotive have been in fuel costs, fueling time, and maintenance. Fuel costs dropped from $160 a month for coal to $23.71 for fuel oil, and fueling costs, based on a dollar hourly wage rate, dropped from $6.50 a week to one dollar. Fueling time was entirely eliminated as an additional item, since the extra hour used each day to fuel, water and clean the steam locomotive was no longer necessary.

Maintenance costs were also cut sharply. Previously, three hours a week were required for oiling, tightening bolts, and inspection, in addition to four hours every three weeks for cleaning the boiler. The Diesel requires only a half hour a week for inspection and oiling. Put on a financial basis, maintenance on the Diesel cost only $13 for the first six months of its operation, as against the $112.66 the steam locomotive would have cost for the same period.

Although the Diesel-electric has been in service only slightly more than six months, taking the totals for yearly operating costs based on the six-months' experience shows an estimated saving of $4,825.28, which is approximately 20 per cent of the cost of the new equipment. On an hourly basis, the cost of operating the Diesel-electric is approximately $2.38 for the first six months, as against a former operating expense of $4.39.

Value of the Diesel-electric has also been demonstrated by its ability to haul heavy loads under difficult conditions. In unloading foundry sand and coke within the plant, for example, the Diesel-electric's smooth tractive force allows it to push 80 tons to a trestle without difficulty, although the approaches include an eight per cent grade combined with a 400-ft. radius curve that had always been difficult to negotiate. And in hauling slag to the dumping pit, the electric unit can easily pull 12 cars, each weighing from 35 to 40 tons, up a two per cent grade.

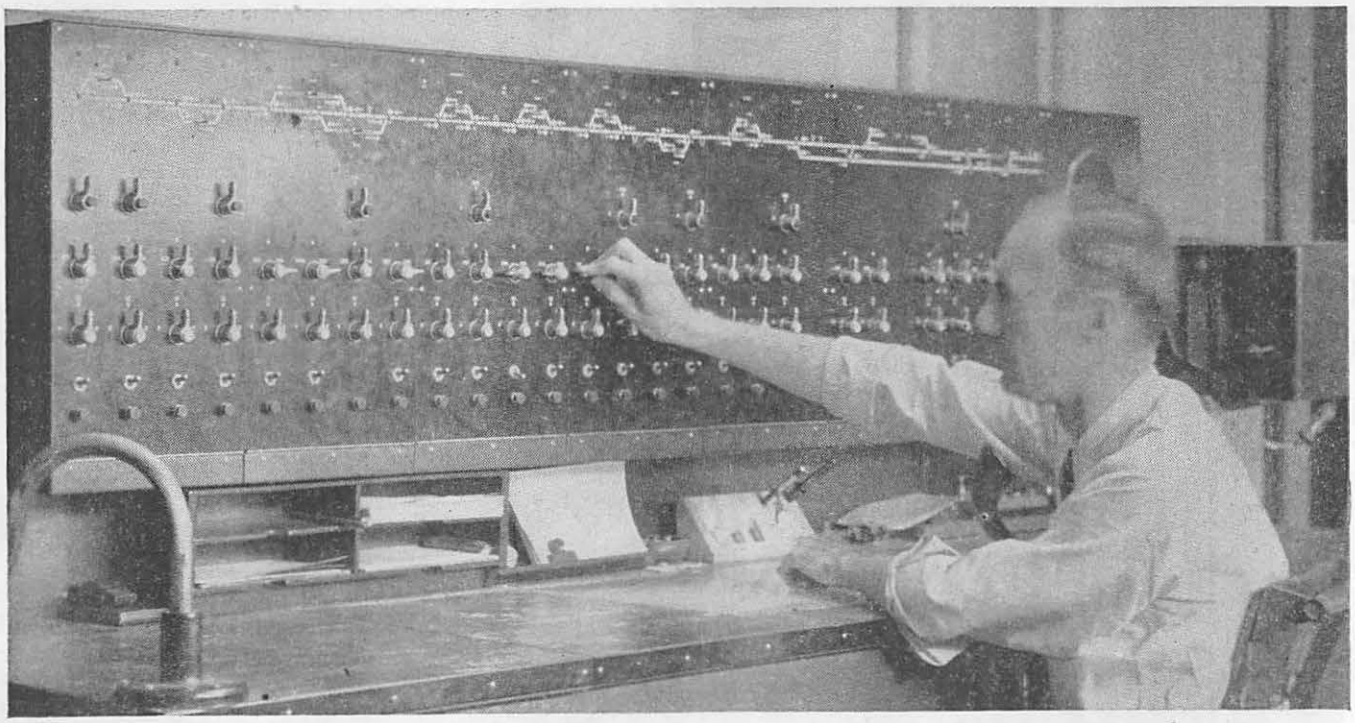
On the former haul, the steam locomotive required a long, fast running start and could only get the load up the grade and around the curve after several tries. In addition, the steam locomotive often threw the rails out of place on the curve, necessitating frequent rail maintenance and replacement at that point.

Material Purchases for January

(*Continued from page 721*)

January 1946 expenditures for crossties amounted to $5,646,000; thus sagging one per cent below those for the same month last year. This reflects to some extent, the general loss experienced in the production of crossties throughout the winter months and, together with low seasoning-yard inventories, points to critical shortages that undoubtedly will be experienced by many railways in conjunction with 1946 installation requirements.

Reflecting the general difficulties of the steel industry, the railways apparently received less rails during the month of January than for any month since August, 1943. The $4,470,000 spent by Class I roads for rails in January was 12 per cent less than similar expenditures in January, 1945, fully 30 per cent less than for January, 1944, and seven per cent less than for the same month in 1943.



The control machine at Denver controls the territory from Denver to East Portal. The machine is located in the Denver National Bank Building

Joint Operation Aided by C. T. C.

Train time saved by 128-mile installation on long heavy grades on the Moffat tunnel route of the D. & S. L. through the Rocky Mountains in Colorado

THE Denver & Salt Lake has installed centralized traffic control on 122.5 miles of single track and 4.7 miles of double track between Denver, Colo., and Orestod. The Denver & Salt Lake, including the Moffat tunnel, provides a direct route westward from Denver to western Colorado, as well as to points beyond in connection with the Denver & Rio Grande Western. From the west portal of the Moffat tunnel, the Denver & Salt Lake extends westward 72 miles to Orestod and then 103 miles beyond to Craig. Also from Orestod, a single-track line of the Rio Grande extends south and west along the Colorado river for 39 miles to Dotsero, Colo., where a connection is made with the Rio Grande line between Pueblo, Colo., and Salt Lake City, and Ogden, Utah. The map shows the relationship of the D. & S. L. to the Rio Grande, the point of importance, with respect to traffic over the new C.T.C., being that this portion of the D. & S. L. also handles a considerable number of through freight and passenger trains of the Rio Grande.

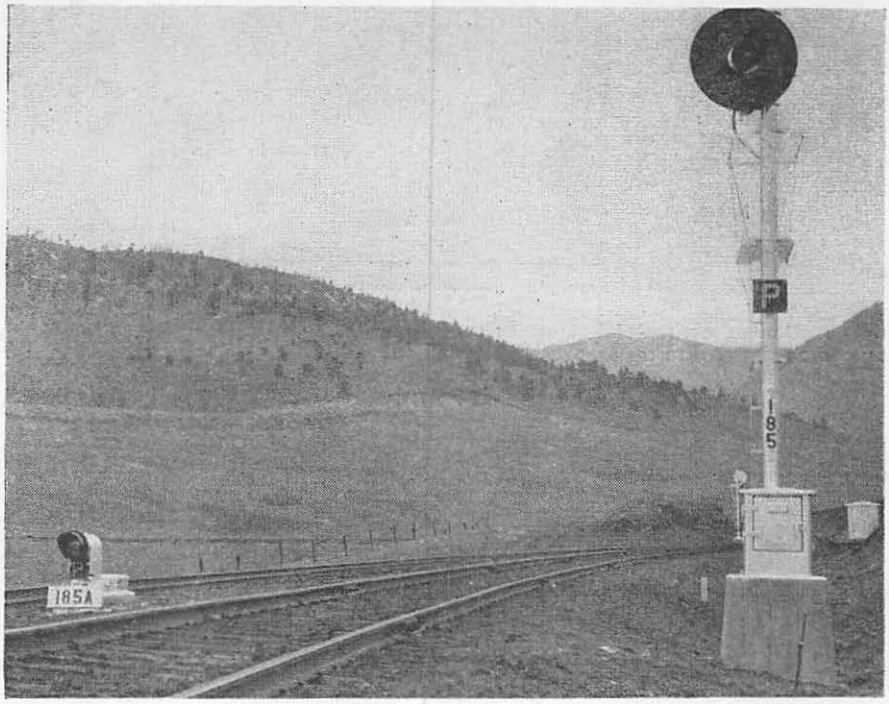
The operating freight district for the Rio Grande is between Burnham (Denver) and Bond, 131.2 miles. The Rio Grande uses the joint track between Prospect, one mile west of Denver Union Terminal, and Orestod, 0.6 miles east of Bond. The operating freight district for the Denver & Salt Lake is between Utah Junction (Denver) and Phippsburg, 164 miles. Between Prospect and Endo, 1.4 miles, the line is single track. Within this territory is Fox Junction, where freight is interchanged between the Rio Grande, D. & S. L., C. B. & Q. and the C. & S. Two main tracks extend from Endo to Ralston, a distance of 4.7 miles.

The maximum grade westward from Denver to East Portal, 50.1 miles, is 2.0 per cent compensated, and helpers are used. From Orestod eastward to the Moffat tunnel, the ruling grade is 1.0 per cent, with exception of Tabernash to Winter Park, 9.1 miles, with a maximum grade of 2.0 per cent, where helpers are also used. The line rises 4,169 ft. and falls 2,539 ft. in 128.7 miles between Denver and Orestod. The maximum curvature in the line is 12 deg., with one exception, a short 15-deg. curve. There are a total of 39 tunnels, ranging in length from 40 ft. to 6.2 miles, the latter being the Moffat tunnel. Of these tunnels, 29 are located east of the Moffat tunnel and 9 west. East of the Moffat tunnel there is an average of one tunnel to every 1.7 miles of line, and west an average of one to every 7.8 miles. The track is well constructed, with 100, 112, 115 and 130 lb. rail and creosoted ties. Volcanic rock, broken rock, gravel or slag is used for ballast.

In addition to the handicaps of grades, curvature and tunnels, train operation in this territory is all the more difficult during the winter months, with temperatures as low as 50 deg. below zero, although the snowfall is moderate. Furthermore, the topography is such that, from a practical standpoint, passing tracks can be located only at certain places, with the result that they are not equally spaced as to distance or train time. On the maximum grade, the pas-

Intermediate Automatic signal location 353-354 between Crescent and Cliff Westward signal 353 is a grade signal. Tunnel No. 27 is in the backgraund

Westward departure signals 185 and 185A at the west end of Arena. Positive signals are identified by the reflectorized letter "P"



senger train speed is about 25 m. p. h. and the freight train speed about 20 m. p. h.

C. T. C. Decision

Because of the increasing importance of the Moffat route, a decision was made a few years ago to install A.P.B. signaling between Denver and East Portal, 50.1 miles, and between Kremmling and Orestod, 25.3 miles. These installations were completed in 1940 and 1943, respectively. However, the Rio Grande traffic over this joint line increased each year, far beyond the original estimates. This taxed the line so that trains could not be handled efficiently by timetable, train orders and the automatic block system, and it became necessary to detour many Rio Grande trains via Pueblo and the Royal Gorge route.

The increase in gross ton-miles, compared with the first year of joint operation in 1935, was 44 per cent in 1936, 49 per cent in 1937, 77 per cent in 1940, 127 per cent in 1941, and 214 per cent in 1942. In 1935 the total daily train movements over the line averaged 16.1. By 1938 this figure increased to 21.6; by 1941, 26.4; and by 1942, 33.5. During October, 1942, the average was 41.7 trains daily, reaching 48 in April, 1943. Between June and September, 1945, the average number of train movements, exclusive of switch engine movements, between Denver and East Portal was 38 daily. Between Winter Park and Orestod the average was 30, the difference in figures being due to helper service. The percentage of Rio Grande car miles to the total car miles over the line between Denver and Orestod increased from 53.5 per cent in 1935 to 69.9 per cent in 1942.

The increased train density occurred notwithstanding a 52 per cent increase in the size of average Rio Grande trains. Increased train loads were made possible by a 20 per cent increase in the size of locomotives. In spite of improved motive power and facilities in general, the adverse effect of increased train density upon transportation efficiency is evidenced by the fact that since 1940 the average Rio Grande train speed on this line had been steadily falling, averaging 20 per cent less in 1942 than in 1940. The trend of gross ton-miles per train hour likewise decreased, averaging 17 per cent less in 1942 than in 1940.

The increased traffic not only forced lengthening of schedules and an overall reduction in operating efficiency but also taxed the line to a point where train movements could not be maintained efficiently by timetable operation, as attested by the necessity for detouring Rio Grande trains via the Royal Gorge route. Therefore, to increase track capacity, improve performance, and increase safety, the decision was made to install C.T.C. between Denver and Orestod.

C. T. C. Savings

With better dispatching control, C. T. C. has made possible fewer double and compound train meets, thus eliminating the need for certain additional facilities that would have been required by timetable, train order and automatic block operation. Two sets of train dispatchers were formerly located at Denver, one to handle train movements between Denver and Sulphur, 86.2 miles, and another set between Sulphur and Craig, 145.3 miles. C. T. C. operators are now located at Denver and Sulphur.

This installation has resulted in a considerable saving in total freight train hours daily, as well as a substantial gain in the average speed of trains. Combining principal, helper and light engine hours, the installation has resulted in a large average saving of engine hours daily, which in turn has stepped up the availability of motive power. It has also resulted in a daily saving in car hours, in turn releasing cars and increasing their availability for other service. Furthermore, with a decrease in train stops, a saving is being made in wear and tear on locomotives and rolling stock, with a saving of water and coal. In addition, passenger train performance has been improved. Savings for stationery forms, office expenses, train order forms, etc., are substantial. Further economy results from less supervision, including time to check train delays and certain dispatching practices. By better control of train movements with C. T. C., the capacity of the Moffat tunnel has been increased. This is important, in view of the fact that the tunnel was designed to handle 19 trains daily.

Track Changes

Due to increased train density and the fact that Rio Grande trains were being limited in length because of sidings, considerable work on additional siding and main-track facilities was in-

Track Changes Between Denver and Orestod

Location	Change	Car Capacity Before Change	Car Capacity After Change
Clay—	Extended 2,739 ft.	70	127
Plain—	Extended 3,400 ft.	72	143
Crescent—	Extended 2,400 ft.	74	122
Cliff—	Extended 2,436 ft.	75	130
	New lap siding 3,598 ft.	..	66
Tolland—	Extended 1,305 ft.	99	128
Fraser—	Extended 1,000 ft.	88	110
Tabernash—	New main track 1.6 miles long resulted in passing siding 2 miles in length	..	..
Dale—	Eliminated	62	..
Granby—	Extended 743 ft.	98	111
	New lap siding 5,280 ft.	..	106
Willows—	Eliminated	98	..
Parshall—	Eliminated as controlled siding	..	60
Flat—	Extended 2,680 ft.	106	161
Troublesome—	Extended 2,906 ft.	70	130
Kremmling—	Extended 1,881 ft.	98	137
Gore—	Extended 700 ft.	137	153
Orestod—	Extended 735 ft. Running Lead	..	..

cluded in this project, so that expected traffic could be handled. Included in the project were numerous track changes shown in the table. A total of 15 hand-throw switches were removed from the main track.

The majority of turnouts in this territory range from No. 10 to No. 18, with nine of the latter in service. Turnouts under No. 15 are being replaced with that size, including Ramapo-Ajax curved points and Type-M switch clips, in a project now under way, which includes the installation of new 115-lb. rail in this territory. The speed limit over No. 10 turnouts is about 15 m. p. h., while that over No. 15 turnouts is about 32 m. p. h. In the C. T. C. project, signals at turnouts to be changed out were so located as to be in the proper positions when the new turnouts were installed. Power-operated switches were equipped with Model-5D switch machines, operated at 30 volts.

Location of Control Machines

The control machine at Denver is in the dispatcher's office, which is in the general offices of the D. & S. L., about one mile south of the D. & S. L. station. The control machine at Sulphur is in a new one-story brick building which was constructed for this purpose. The machines are of the sectional type which permit changes or additions as may be required. The machine at Denver has seven sections and one master unit to control from Denver to the east portal of the Moffat tunnel. The machine at Sulphur has seven sections and two master units, one to control eastward between Sulphur and Winter Park, and the other to control westward between Sulphur and Orestod.

The C. T. C. is known as the General Railway Signal Company's Class F, Type M-Duplex, 10-step system. The power-operated switches and signals are controlled by codes sent out from the office, and likewise indications on the control panel to repeat the operations of the switches and signals, as well as track occupancy, are sent into the office by codes. These codes are transmitted over three line wires by means of which control codes and indication codes can be transmitted simultaneously. The coding equipment on this installation can control as many as 32 single switch field locations or their equivalent, with 5 controls and 13 indications each.

The Denver machine has 24 switch levers, controlling 22 turnouts and 2 crossovers; 4 spare switch spaces; 26 signal levers, controlling 96 signals; 2 spare signal levers; 25 code start buttons; 3 code start button spare spaces; 22 employee's toggle switches; and 10 lock levers. The Sulphur machine has 27 switch levers, controlling 24 turnouts and 3 crossovers, 1 spare switch space; 29 signal levers, controlling 107 signals; 1 spare signal lever space; 4 lock levers; 30 code start buttons; and 24 employee's toggle switches.

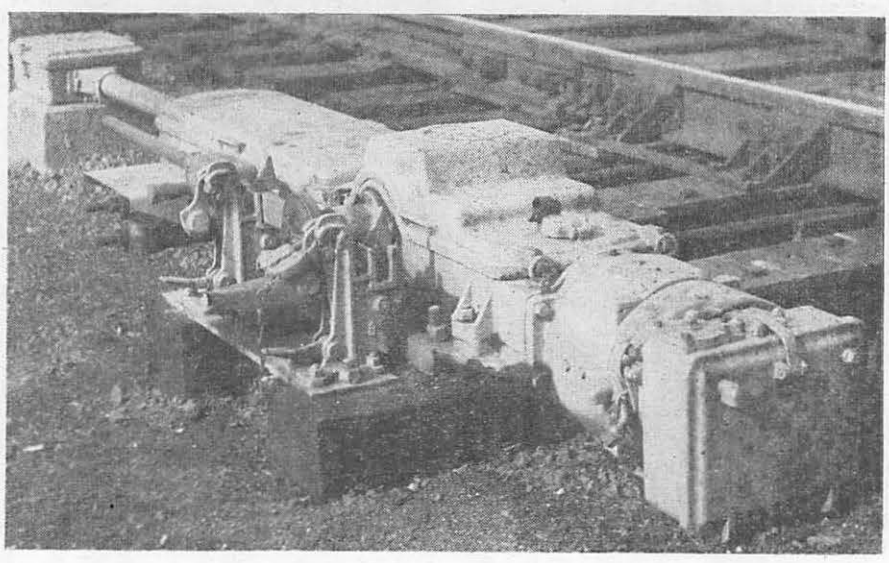
Each control machine includes a G. R. S. automatic train recorder, in the center of the desk portion of the machine. This recorder has three styli to correspond with each of the OS sections in the field. One stylus is operated when a signal governing westward at the corresponding field location is cleared. The second stylus is operated when the eastward signal is cleared, and the third stylus is operated when the OS section is occupied. Thus the record on the chart shows which signal was clear before the train arrived. These charts are burnt by the styli and not inked. Charts, each 125 ft. long, are moved 2 in. per hour by a small 110-volt, 60-cycle synchronous motor.

To send controls, the signal and switch levers are turned to the position desired and the associated start button is pressed. Operation of the start button sends the controls to the field location, and the switches and signal, if contrary in the field, respond to the position of their respective levers. Secondary tracks, such as passing sidings, are not signaled, and signals may be cleared into such tracks regardless of occupancy. If a signal is cleared and then taken away by lever control, time locking is effective automatically.

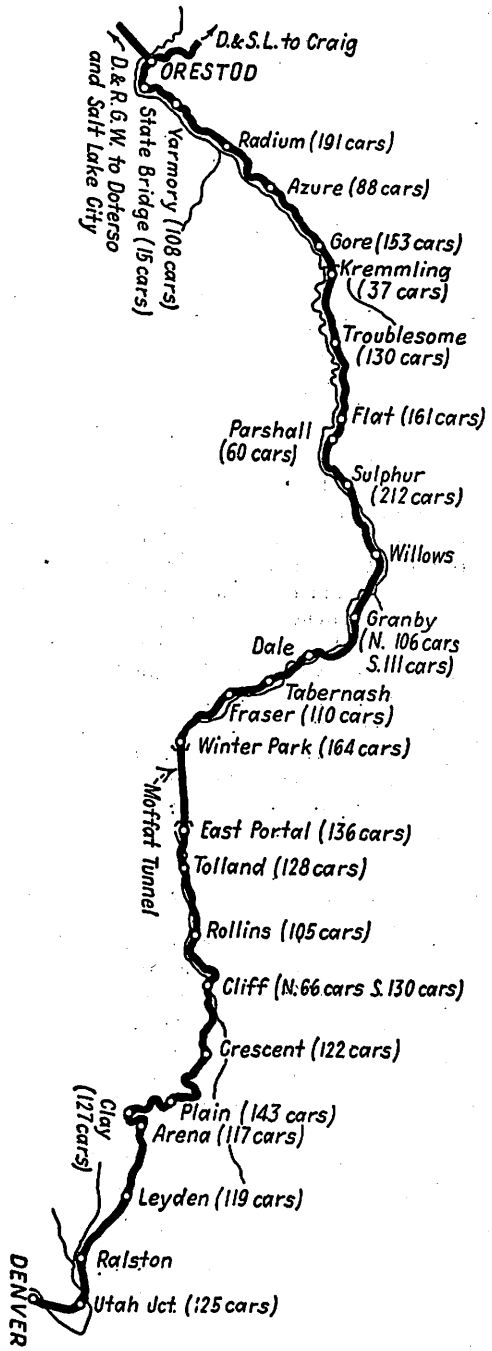
Spacing of Intermediate Signals

In determining the number and locations of new intermediate automatic signals, various factors were involved. The passing tracks are not spaced evenly on a basis of distance or train time. Braking distances for westbound trains on ascending grades are entirely different from braking distances for eastbound trains descending the grade. Furthermore, on account of the mountains, curves and tunnels, intermediate signals had to be placed at certain locations to provide sufficient sighting distances. The high and dwarf signals are the General Railway Signal Company's searchlight type.

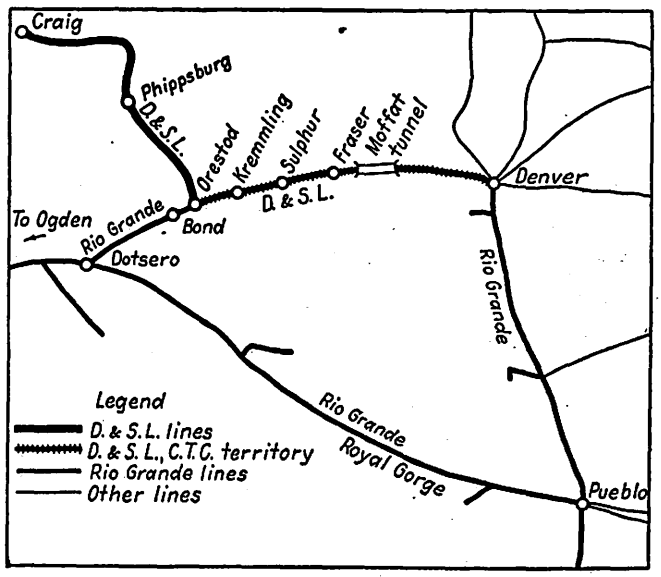
Where sufficient clearance permits, the high and dwarf signals are provided with full-size backgrounds. In such instances, the high signals are side-of-the-



The power-operated switches are equipped with model-5D electric switch machines



Map showing the relationship of D. & S. L. lines to Rio Grande lines



Map of territory showing towns and car capacities of passing sidings

mast mounted on the left side, and have standard ladders and platforms. Where signals are between tracks, the secondary tracks were moved to 18-ft. centers, and high signals of the top-of-the-mast type were used, with small backgrounds, straight ladders and no platforms. Single-"arm" signal units are mounted on masts 14 ft. above the rail level. Where second "arms" are in use, they are mounted 5 ft. below the top "arm." On signals with side-of-the-mast mounted units, short pinnacles are used. Dwarf signals between tracks have small backgrounds, and those outside of tracks have standard backgrounds.

The station-entering signals display four aspects and indications, namely, Stop, Rule 292; Restricting, Rule 290; Approach, Rule 285; and Clear, Rule 281. The high and dwarf station-departure signals, all of which are single-unit, display three aspects; Stop, Approach and Clear. The use of three-aspect dwarf signals on the passing tracks, as compared with two-aspect, displaying only yellow when cleared, facilitates moves. Such a signal displays red normally, and, when cleared by the operator, will display green if two or more automatic blocks are unoccupied, or yellow if only one block. When a green aspect is displayed, an engineman can pull his train out and accelerate to normal speed, otherwise it would be necessary to run at reduced speed until he saw the next signal displaying a green aspect.

The intermediate automatic signals display three aspects, with the exception of grade signals and a few special signals. These aspects and indications include Stop-and-Proceed, Rule 291, and the Approach and Clear aspects, mentioned heretofore. Each intermediate automatic block signal on ascending grades is equipped with a grade signal. The Stop-and-Proceed aspect and the grade light authorize a following freight or passenger train to pass the signal at a speed not exceeding 8 m. p. h., without stopping at the signal. The control of the grade signal is directional, i. e., for an opposing train, the grade lamp is not lighted.

Coded Track Circuits

The track circuits are of the coded type except the short release track circuits in advance of the hand-throw switches with electric switch locks, and the short OS track circuits through power switch layouts. In a station-to-station block, the coded track circuits are normally-deenergized, and when C. T. C. control is sent out to line up for a station-to-station move, the first action is to energize the track circuits in the station-to-station block to feed in the direction opposite to the train movement. Another feature is that the various rates of code, i. e., 75 and 120 or 180 per minute, are used to control the signals to display the aspects and to accomplish directional control of the absolute permissive block system, without the use of signal control line wire circuits. Thus the only signal line wires required are the line wires for the C. T. C. line codes and for a. c. power distribution.

Absence of track circuit energy, steady energy, or improper code, sets the controls for a red aspect. Code at 75 per minute controls the yellow aspect, and code at either 120 or 180 controls the green aspect. Receipt of 180 code at the entrance end of a station-to-station block serves also to indicate that the station-to-station block is unoccupied.

This installation was constructed and placed in service by the signal department construction forces of the Denver & Salt Lake under the direction of B. W. Molis, signal engineer. Construction was under the jurisdiction of O. H. Brown, signal construction engineer; B. M. Durland, signal supervisor, and A. H. Asnicar, signal inspector. Construction of all new signal pole line facilities was under the jurisdiction of S. V. Wirz, superintendent of telegraph and telephone. The major items of signaling equipment were furnished by the General Railway Signal Company.

COMMUNICATIONS AND BOOK . . .

A. F. Whitney on "Full Crew" Opinion

AT CHICAGO

TO THE EDITOR:

The reprint of *Railway Age* for March 2, 1946, containing an article entitled "What Railroad Employees Think About the Railroad Industry" has recently come to hand.

Although I do not have great faith in opinion polls, especially where they indicate, as this one does, that only one railroad employee in five asks for higher wages, I have read this article with interest.

I hope the carriers will especially note that, even according to this poll which was not sponsored by railway employees, 79 per cent of those employees favor full crew requirements and 64 per cent favor train limitation.

A. F. WHITNEY,
President, Brotherhood of Railroad Trainmen

Firing Rate and Boiler Efficiency

NEW YORK

TO THE EDITOR:

A letter from J. H. Harrison, mechanical engineer of the Southern, in your issue of March 16, 1946, comments on the boiler performance of the Pennsylvania T-1 locomotive, as reported by R. P. Johnson to the New York Railroad Club.

Mr. Johnson showed that when boiler efficiency was plotted against the rate of firing, the points fell very close to a straight line. Mr. Harrison points out that if a straight line law between boiler efficiency and rate of firing is assumed, the relation between rate of evaporation and rate of firing can be found from the characteristics of the straight line and that this relation will show a maximum rate of evaporation at a definite rate of firing and efficiency. An earlier discussion of this same subject will be found in the writer's article "A Note on Locomotive Boiler Tests" in "Engineering" for February 4, 1921.

Since that time a large number of locomotive boiler tests have been studied and it has been found that the relation between boiler efficiency and firing rate is always represented very closely by a straight line. In one or two cases a tendency has been noted for the boiler efficiency at low rates of firing to show values slightly above those corresponding to the straight line through the points for the higher rates of firing. This deviation is, however, hardly greater than the experimental uncertainty in the values. Locomotive boiler efficiency falls off as the rate of operation is increased, and all of the writer's experience leads to the belief that the best method of showing the relation between efficiency and rate of operation is to plot boiler efficiency against rate of firing thus obtaining a straight line relation.

When this line of study was first opened up, it was an attractive thought that by making a few accurate tests at moderate firing rates, it should be possible to lay down a straight line from which could be computed the maximum rate of evaporation of the boiler. The straight line relation has proven useful, but it has been found impracticable to force the boiler up to the maximum rate of evaporation computed from the straight-line relation. As the rate of evaporation approaches its maximum value, it becomes more and more difficult to keep up steam and to increase the rate of evaporation.

Apparently the practical upper limit of evaporation is reached before the computed maximum because of the difficulty in getting air to the fire in continually increasing quantities. Each pound of air burned releases a quantity of heat and therefore generates a quantity of steam which is practically constant irrespective of the rate of operation. On the other hand as the boiler is forced, the resistance to air flow increases rapidly and consequently the weight of air drawn in per pound of steam exhausted decreases continuously. The limit to the rate of operation is reached when an increase in the rate of flow of steam to the exhaust fails to draw in air at a sufficiently increased rate to produce enough heat to generate the increased amount of steam. With more steam exhausted than is being evaporated, the pressure falls and the limit of evaporation is reached.

LAWFORD H. FRY,
Director of Research, The Locomotive Institute

Foremen Key to Employee Education

NEW YORK

TO THE EDITOR:

I wish to congratulate you for your foresight in having conducted the survey of railway opinion, reported in *Railway Age* of March 2 and March 23. I am impressed with the fact that the vast majority of railroad employees like their jobs, their management and their foremen, and do not like government ownership. I am surprised at the lack of knowledge with respect to competition, profits and problems. It is evident that we have a big job to do in educating our people. Their opinions, as you say, are the keystone to successful relations of the railroads with the public. It is evident that we have not strengthened that keystone sufficiently.

One thing that impresses me is that 66 per cent of employees rate their supervisor or foreman as "good." It has always been my opinion that the most important person affecting employee relationship is the supervisor or foreman immediately in charge of men, and that our big job in employee relationship is the better education and training of our supervisors. They are a part of management, and they have the every-day contact with employees. Top management is too far removed from the individual employee. It can determine policy and it can be liberal with respect to certain matters, but no amount of liberality and good intentions on the part of top management will counteract the evil of poor relationship between employees and their foremen. Our job with respect to supervisors and foremen is:

1. See that they understand company policy.
2. See that they have an adequate knowledge of the results of operations and of problems.
3. See that they understand the contracts governing the employees under their jurisdiction.
4. See that they treat their employees with human consideration and sympathy.
5. See that they are sufficiently close to their employees to know their personal problems and take an interest in them.
6. See that they encourage suggestions from employees, adopting those that are good, trying those about which there is doubt, and always being careful to explain those that are not practical.
7. See that they listen to the complaints and grievances of their employees and try to do something about them, but in any event listen to them. Many a complaint or grievance disappears when an employee has a chance to get it off his chest. When he can't get it off his chest, it festers.

This list is undoubtedly incomplete, but at any rate it gives a specific target to shoot at.

WM. WHITE,
President, D. L. & W.

From Trail Dust to Star Dust, the Story of American Transportation, by Edward A. Starr. 260 pages. 6 in. by 9 in. Bound in cloth. Illustrated. Published by the Transportation Press, Box 381, Dallas 1, Texas. Price $3.00.

If you know an Indian, consider him a friend, because it was his ancestors whose trail-finding ingenuity in many respects paved the way to make American transportation what it is today. And it is to that race which the author devotes part of the opening chapter of this book, which traces the nation's transportation problems and progress from "away back when" to the present "here today, there tomorrow—if not today" hustle-bustle standard of travel.

Mr. Starr covers America's transportation growth in four exciting chapters—supplemented by outline maps (not invariably accurate) and drawings—including the Story of the Trails; Transportation by Sea, River, Lake and Canal; the Story of Our Railroads and Motor Transportation; and the Story of Our Air Transportation.

The author quickly arrives at the conclusion that the railroads, since their inception, always have, now and for a long time will continue to set the pace as the leading hauler of tonnage. In conclusion, he observes, "The railroad, being able to haul in a single train many cars of great capacity and using varied equipment for general transportation problems, maintains commodity tariffs adapted to the transportation of almost any character of freight that may be offered."

GENERAL NEWS

Wage Increases Made by Arbitration Boards

Non-ops awarded 16 cents an hour while ops get $1.28 per basic day

Wage increases amounting to 16 cents an hour for non-operating railway employees and $1.28 per basic day for operating employees were awarded by the two arbitration boards on April 3. The increased rates are retroactive to January 1, 1946.

In the non-operating case the award was signed by Ernest M. Tipton, chairman, and Herbert B. Rudolph, the "neutral" members of the board; and by Felix H. Knight and E. E. Milliman, the employee members who, however, filed a long special opinion in which they asserted that the award was made "arbitrarily" and "without consideration of the equities of the employees' claim." They stated that they had joined in the award "solely because the only alternatives left to us by the other members of the board were to have the proceedings end in failure to make an award, or to have the amount awarded subjected to a further arbitrary reduction below the amount considered proper by the arbitrators appointed by the National Mediation Board in order to induce the carrier members to join it."

Carrier Members Did Not Sign—Ralph Budd and J. Carter Fort, the carrier members of the board, did not sign the award.

At a press conference following the filing of the award, B. M. Jewell, chairman of the Employees' National Conference Committee, termed the award wholly inadequate and declared that it was the intention of the men to file notice on the carriers for additional wage increases.

The award in the operating case was signed by Richard F. Mitchell, chairman, and the "neutral" member of the board; R. W. Brown, the carrier member; and Carl J. Goff, the employee representative, who, however, noted his dissent to the findings of the board but filed no separate opinion. In a statement issued shortly after the filing of the award, Mr. Goff, like Mr. Jewell, termed the award "wholly inadequate," charging that it does not correct "gross inequities," is lower than the "pattern" of increases established in other industries during the war, and fails to meet the increased standard of living or give the worker a "share in the increased output per employee."

$619 Million a Year—Speaking for the carriers, John M. Fitzgerald, vice-chairman, Eastern Railways Committee on Public Relations, and Harold M. Sims, director of public relations, Western Association of Railway Executives, said that the increased wage rates will mean a minimum wage of 73 cents an hour in the railway industry. They said that the increased payroll costs of the 1,220,000 employees involved, will amount to $584 million in wage payments and $35 million in payroll taxes, or a total of $619 million. Back wages for the first three months of 1946 are expected to total $146 million as a result of the increases. On a percentage basis this increase of 16 cents an hour amounts to 17.9 per cent of previous wage rates, and, when added to other increase, represents a total increase of 51 per cent over pre-war wage rates.

Under the terms of the Railway Labor Act, the awards of the arbitration boards are binding on the parties. But either party is free to file regular notice for additional changes in wage rates.

B. of R. T. Demands in Canada

The Brotherhood of Railroad Trainmen has filed with National War Labor Board in Canada an application for "direction to make effective an increase of 25 per cent in basic wage rates, also some compensible corrective rules governing the services of conductors, train baggagemen, brakemen, yard foremen, yard helpers, and switch tenders, on Canadian railways."

J. J. Hendrick, vice-president of the brotherhood, stated that a former award by the board and the conversion of bonus payments were based upon factors which reacted to the detriment of men for whom the present application is made.

In respect to request for revision of rules, he stated the rules had not been materially changed for many years and that the proposed revisions were required to correct operating practices.

February Truck Traffic

Motor carriers reporting to the American Trucking Associations, Inc., transported in February 1,542,484 tons of freight, a decrease of 7.4 per cent below the 1,666,535 tons transported in January and 10.0 per cent below the February, 1945, total of 1,714,661. The A.T.A. index number, based on the 1938-40 average monthly tonnage of the reporting carriers, was 151.9 for February.

The foregoing figures, according to the A.T.A. statement, are based on reports from 208 carriers in 37 states. Truckers in the Eastern district reported a tonnage decrease of 10.7 per cent below January and an 11.9 per cent decrease below February, 1945. In the Southern region, the decrease was 2.0 per cent below January and the decrease below February, 1945, was 4.8 per cent, while the respective figures for the Western district were decreases of 1.4 per cent and 7.8 per cent.

2 Months Net Income Was $60,000,000

Net railway operating income for the same period was $128,659,362

Class I railroads in the first two months of this year had an estimated net income, after interest and rentals, of $60,000,000, as compared with $76,424,773 in the corresponding period of 1945, according to the Bureau of Railway Economics of the Association of American Railroads. The two-months net railway operating income, before interest and rentals, was $128,659,362, compared with $150,705,753 in the same period last year.

February's estimated net income was $26,000,000, compared with $37,378,247 in February, 1945; while the net railway operating income for that month was $57,816,966 compared with $74,663,603. In the 12 months ended with February, the rate of return averaged 2.98 per cent, compared with 3.89 per cent for the 12 months ended February 28, 1945.

Gross Down 16.6 Per Cent—Operating revenues for February totaled $579,142,025, compared with $712,404,097 in February, 1945, while operating expenses totaled $440,221,092, compared with $499,458,376. Gross in the two months totaled $1,220,013,905, compared with $1,463,316,074, a decrease of 16.6 per cent. Operating expenses amounted to $940,280,172 compared with $1,029,503,729, a decrease of 8.7 per cent.

Class I roads in the two months accrued $129,125,837 in taxes compared with $256,212,275 in the same period in 1945. Forty Class I roads failed to earn interest and rentals in the first two months, of which 19 were in the Eastern district, six in the Southern region, and 15 in the Western district.

Total operating revenues in the first two months totaled $1,220,013,905 compared with $1,463,316,074 in the same period of 1945, or a decrease of 16.6 per cent. Operating expenses in the first two months of 1946, amounted to $940,280,172 compared with $1,029,503,729 in the corresponding period of 1945, or a decrease of 8.7 per cent.

Forty Class I railroads failed to earn interest and rentals in the first two months of 1946, of which 19 were in the Eastern District, six in the Southern Region, and 15 in the Western District.

In the East and South—Class I roads in the Eastern district in the two months had an estimated net income of $15,000,000 compared with $20,490,801 in the same period of 1945. For February, their esti-

(Continued on page 737)

Carry New President of Pullman-Standard

Succeeds C. A. Liddle who has been elected chairman of the board

Champ Carry, executive vice-president of the Pullman Company since 1941, has been elected president of the Pullman-Standard Car Manufacturing Company, succeeding C. A. Liddle, who has been elected chairman of the board of Pullman-Standard.

Mr. Carry resigned as a director and vice-president of the Pullman Company, the sleeping car operating subsidiary of Pullman, Inc., to accept the presidency and a directorship of the car manufacturing subsidiary. He will continue to serve as a director of Pullman, Inc. Mr. Carry is also a director of the Pullman Trust & Saving Bank, M. W. Kellogg Company, United States Gypsum Company, Cornell Wood Products Company, and the Hummel & Downing Co. During World War I he served as a lieutenant in the 18th Field Artillery, Third

Champ Carry

Division, and was awarded the Distinguished Service Cross.

Mr. Carry was born at Lockport, Ill., on March 31, 1896, and received his higher education at Cornell University. He began his business career in 1919 in the shops of the Haskell & Barker Car Co., at Michigan City, Ind. Two years later he became sales agent of the company, and continued in that capacity with the Pullman Company when it acquired the Haskell & Barker Car Co. in January, 1922. When the Pullman Car & Manufacturing Corp. was formed it 1924, Mr. Carry continued with that division, of which he became vice-president in charge of sales in 1929, after serving previously as manager of sales. In April, 1932, he was elected vice-president and assistant to the president of the Pullman Company, the operating subsidiary. From May 15, 1936, to January 14, 1941, he served as vice-president in charge of operations, becoming executive vice-president of the company on the latter date.

Mr. Liddle was born at Philadelphia, Pa., on November 14, 1877, and educated at Drexel Institute in that city. From 1894 to 1905, he served as draftsman, cost estimator, and chief draftsman for the American Car & Foundry Co., and as assistant to the general manager of the same company from 1905 to 1916. In 1916 Mr. Liddle became vice-president of the Haskell & Barker Car Co., and served in that capac-

C. A. Liddle

ity until 1922, when he was elected vice-president of the Pullman Co. From 1924 to 1928 he served as vice-president of the Pullman Car & Manufacturing Corporation, and was elected president in the latter year. He was also president of the Standard Steel Car Corporation from 1931 to 1935, when it was merged with the Pullman Car & Manufacturing Company to form the present corporation, of which Mr. Liddle has been president since 1935.

Santa Fe to Try Streamlined Steel Refrigerator Car

A new, streamlined, stainless steel refrigerator car, which will be 5,000 lb. lighter than similar cars now in use, will be placed in operation by the Atchison, Topeka & Santa Fe next June. The car was designed and is being manufactured by the Consolidated Steel Corporation, in its Los Angeles shops.

Built with a one-inch air gap between the side lining and insulation to provide uniform temperature within, the car will include a number of other special features such as a sliding door to permit better clearance at loading docks and other structures along the track, and a convertible lightweight bulkhead. A continuous duct system will be provided which can be cut in or out by means of open or closed louvers operable by a handwheel over the door opening. Door panels will act as a large toggle which will result in easy manual operation for positive seal and will be self-locking when the toggle is over center. The door may be operated with the usual LaFlare seals or rubber seals as desired.

Insulation will be blanket Superlite in combination with reflective water vapor resisting papers, applied in such a way that maximum insulation is achieved with a minimum wall thickness. Latest improvements in welding technique will be employed. Underframe of the car is being fabricated with open hearth and alloy steels welded. Completed underframe, ends, roof and sides will be riveted in final assembly for ease of maintenance.

Railroad Case Heard by Emergency Board

Dr. Parmelee first management witness in wage and rules proceeding

Proceedings before the president's emergency board that is to make recommendations as to the justification of the demands of the Brotherhood of Railroad Trainmen and the Brotherhood of Locomotive Engineers for an increase in pay of 25 per cent, with a minimum of $2.50 per basic day, and for changes in 45 working rules as well, were continued on March 26, with the completion of the presentation of evidence in behalf of the employees. The union's first witness was Henry P. Melnikow, who was recalled to give conclusions he reached upon study of the employees' exhibits dealing with the "inequities" in pay suffered by these employees when compared with workers in other industries.

Mr. Melnikow asserted, first, that the record showed that there had been sufficient increase in productivity per man-hour of these employees to preclude the railway industry from denying the proposed wage increase on that ground, adding that, in this respect the record of the railroad industry was as good as any other industry, and exceeded the average increase in output per man-hour substantially.

Gains of Other Workers—He dedeclared from 1936 to September, 1945, the hourly wages of railroad employees had failed by 29.3 cents an hour to keep up with the increases in wages secured by industrial employees, and that in that time industrial workers had secured pay increases amounting to 45 per cent, as compared with only 15 per cent for these railway employees. On the basis of hourly earnings he said the increase of certain industrial employees in that same period, including overtime and allowances for arbitraries had been 44 per cent, compared with a correspouding increase of 23 per cent for the railway workers, which, he said, was more than sufficient to justify the full amount of the 25 per cent increase requested.

With respect to the prospective reduction in take-home pay, Mr. Melnikow revealed that the rail unions expected to restore the previous limitation of mileage and hours that can be worked by individual employees, which limitations were discontinued as a war-time measure to conserve man-power, and that the reduction in hours from that policy would result in a loss in take-home pay, at present rates, of about 14 per cent. Mr. Melnikow also declared that since 1941 the rates of pay of these railway employees had risen 15 per cent while the cost of living had risen 33 per cent according to government estimates, adding that in the stabilization order the president had used the word "rates" rather than "earnings," and that therefore any cost of living adjustment must be based on rates of pay rather than on actual earnings.

Summing his case, Mr. Melnikow said that the Interstate Commerce Act and railway labor legislation made it clear that in

determining rail wages, a comparison of railway pay scales with those of other industries must be made and that any inequities found must be corrected. On this basis alone, he said the proposed increase was mandatory. The primary purpose in presenting evidence as to cost-of-living and take-home pay increases was to show that, by taking care of the "gross inequities" in the case by granting the 25 per cent demanded, these factors would also be covered.

"Unprecedented Prosperity" — An additional factor, according to Mr. Melnikow, was the unprecedented prosperity of the railways. After considering the effects the "carry-back" provisions of the tax law, he declared that, "certainly during 1946 there isn't any amount of money that this board could, within reason, think of recommending that wouldn't be paid for out of the 'carry-backs' rather than out of any deficit for the railroads, because the industry has to its credit well over $1½ billion, or more, in excess profits tax paid in 1945 and 1944, and on which they are drawing wherever they can for other purposes, so that there is no question but what any justifiable wage increase will not cost the carriers anything in 1946."

Dr. Julius H. Parmelee, director, Bureau of Railway Economics, Association of American Railroads, took the stand as the initial carrier witness. He said, "The principal post-war concern of the railroads, in the next two or three years is centered on the volume of traffic that they can obtain and the cost levels at which that traffic can be handled; and inasmuch as costs in the railroad industry consist to such a large extent of wage rates and payrolls, the question of wages, of course, becomes of considerable importance."

Discussing the effects of the recent war on railway traffic, Dr. Parmelee said that the all-time high in freight traffic was reached in 1944, while in 1945 there was a moderate decrease of 1.3 per cent in freight ton-miles handled during the first seven months, as compared with 1944, and a decrease of 16.6 per cent during the last five months, with the average decrease for the year being 7.6 per cent. For 1946, he said, the preliminary figures show a decline of 15.4 per cent during January and February, as compared with the same period of 1945.

Post-War Traffic—Dr. Parmelee said that the research staff of the Interstate Commerce Commission had estimated railway traffic in the first three post-war years, that is 1946, 1947 and 1948, to average 479 billion ton-miles, slightly in excess of the average for 1941, but 30 per cent below the ton-miles of 1945 and 35 per cent under 1944. For passenger traffic, the I. C. C. staff estimated the average of the three post-war years to be 39.1 billion passenger miles, 10 billion passenger miles greater than 1941 and greater than for any year since 1930, but 57 per cent under 1945, and 59 per cent below 1944.

Concerning the carriers' investment in their property, Dr. Parmelee estimated that as of December 31, 1945, Class I roads had a total investment of about $28 billion, less depreciation of $5.5 billion, or a net investment of $22.5 billion. The rate of return, Dr. Parmelee said, was 5.24 per cent on investment in 1917, averaged 4.49 per cent from 1921 to 1930, 2.22 per cent from 1931 to 1940, and 5.26 per cent from 1941 to 1944. For 1945, he estimated that the rate of return on investment after depreciation would be 3.78 per cent. Dr. Parmelee also directed the board's attention to a comparison of net railway operating income and traffic in 1929, the pre-war traffic peak, with those of 1944, pointing out that in 1944, operating revenues were 50 per cent greater than in 1929, while net railway operating income was 12 per cent less in 1944 than in 1929.

As he did in the two arbitration cases, which were concluded last week, Dr. Parmelee restated the operating results for 1941 in terms of present wages, not including the requested increases under discussion before the emergency board and present costs of materials and supplies. According to his calculations, if the railroads were to again handle the 1941 traffic, at 1941 rates, the net results of their operations would be a deficit of $255 million, instead of an income of $500 million, which they actually earned in 1941.

Forecasts 1946 Results—For 1946, Dr. Parmelee forecast freight revenues of $5.1 billion, passenger revenues of $1.2 billion and other revenues of $500 million, for a total revenue of $6.8 billion for the year. Freight service expenses he estimated will amount to $3.9 billion in 1946, and passenger service expenses $1.3 billion, for total expenses of $5.2 billion forecast for 1946, with a probable operating ratio of 86.7 per cent. Dr. Parmelee estimated that taxes in 1946 would total $685 million, comprising $210 million of payroll taxes, $190 million of federal income taxes and $285 million of other taxes. Equipment and joint facility rentals, he said, would amount to $165 million, so that a net railway operating income of $750 million could be expected in 1946. After allowing for other income and fixed and contingent charges, Dr. Parmelee's final estimate for 1946 results, based on current wages and prices, is a net income of $330 million.

Dr. Parmelee's testimony was concluded on March 27, at which time he told the board that freight service costs per thousand revenue ton-miles had showed an almost continuous decline from 1921 to 1933, then began to rise in a somewhat irregular manner until it reached $6.78 in 1938, then fell to a low of $5.56 in 1942. Since 1942 freight service costs, in spite of increased traffic have shown a steady rise, being $6.44 in 1944, or approximately the level of the years 1936 and 1937.

Wage costs per train mile including both passenger and freight, he said, were 61.6 cents in 1936, 67.4 cents in 1940, and 94.7 cents in 1944. Per thousand gross ton-miles, Dr. Parmelee said that wage costs had risen from $1.23 in 1936 to $1.51 in 1944, adding that a further increase in unit costs could be expected in 1946 due to the smaller volume of traffic forecast.

Must Spend for Improvements—Concerning improvements to the plant, Dr. Parmelee said that his studies indicated that the railroads should spend for new equipment alone about $500 million per year for the next five years, for which they should purchase not less than 90,000 freight cars, 1,000 locomotives and 1,000 passenger cars per year. In addition he thought that $300 million per year should be spent on the fixed property for each of the next five years. Dr. Parmelee also estimated the future revenue needs of the carriers, which he said should average, in net railway operating income, about $1 billion annually, made up of $535 million for fixed and contingent charges, $265 million for improvements and $253 million for dividends, plus another $100 million for a moderate increase in dividends and certain additional improvements, less about $150 million income from outside investments.

Dr. Parmelee next presented statistics correlating wage increase with changes in the railway rate structure. It was significant, he said, that with only two exceptions, one between 1932 and 1934, and another from 1941 to date, that every change in railway wages had been followed by a corresponding change in charges to the public, subject to a time lag of several months before the rate changes can be made effective. "Generally speaking," he said, "increased costs of railroad operation, especially when they result from an increase in so large an element of costs as the payroll, are reflected in an increase in either freight charges or passenger fares, or both."

Dr. Parmelee also presented a discussion of the relationship of railway costs to net income. Using the carriers' estimate of freight revenues of $4,670 million for each of the three post-war years, and existing prices of materials and wage rates, Dr. Parmelee said that an increase of 17.1 per cent in freight rates would be required to hold net railway operating income to the level of 1941. If, he said, the $920 million annual cost of the wage demands now under consideration were added to this an additional freight rate increase of 19.7 per cent would become necessary, or a total increase of 36.8 per cent, but still giving no effect to the influence of the increase in material prices since January 1, 1946.

Can't Ignore Effect on Rates—"Regulation of freight rates and passenger fares is a function of the Interstate Commerce Commission, but this board cannot ignore the inevitable effect of a wage increase on rates. So called cost-price relationships operate as effectively in the railroad industry as in manufacturing or other forms of production," Dr. Parmelee declared.

He also presented an exhibit, which he described as self-explanatory, showing the growth of competitive transportation agencies and their effects on railway traffic. He also sought to demonstrate that much of the increased traffic of recent years was business that would have moved via various competitors except for war-time restrictions.

In his discussion of the increased productivity of the railway industry, Dr. Parmelee said that this was the result of many factors, including an improved plant, better rolling stock, more effective organization of the personnel, progressively better technique and a thorough control of expenditures. He asserted that train and engine service employees have already shared to a considerable degree in the benefits of the increased productivity of the industry, through shorter hours and opportunities to

increase their monthly mileages and hence their earnings. He asserted that in the immediate post-war years the computed output of railroad traffic per employee-hour will almost certainly be less than during the war years, due largely to lower traffic levels.

The Dual Basis—Dr. Parmelee was followed on the witness stand by Earl B. Perry, manager of personnel of the New York, New Haven & Hartford, also appearing in behalf of the carriers, who discussed, as to train and engine service employees, the dual basis of pay, mileage limitations and the history of the standard basic rates of pay in train, engine and yard service. Mr. Perry told the board that about 60 per cent, or 180,000, of the employees in these services, are paid on the dual basis, or miles and hours, while the remaining 40 per cent are paid on the hourly basis. After describing the mechanics of the dual basis of pay and of the short turnaround rule, Mr. Perry told of the effects of mileage limitations on earnings. During the war, he said, these restrictions were not observed to some extent, but recently there has been a tendency to restore them. In engine service the usual limitations are 4,800 miles a month for regular men in passenger service and 3,800 miles in freight service. The corresponding limitations in train service are from 5,500 to 6,000 miles a month for passenger crews and 3,500 to 3,800 miles for freight crews.

Mr. Perry resumed his testimony on March 28, by answering a question put to him by the chairman on the previous day as to the percentage of the runs in short turnaround passenger service that end in overtime. Speaking for his own road, and for the Boston area, Mr. Perry said that 99 of 119 runs in that territory, or 83 per cent, were on overtime. For the country as a whole, he said that he thought the percentage might be a little lower due to more mid-day trips being operated in some areas.

Concerning the proposed increase in wages of $2.50 per basic day, Mr. Perry said this would amount to $120 per month for passenger engineers and firemen, based on the 4,800 mile maximum monthly guaranteed mileage limitation, $95 per month for all train and enginemen in freight service, based on 3,800 miles, and $75 monthly for passenger trainmen on a 4,500 mile monthly guarantee, and between $91.50 and $100 monthly for the 5,500 and 6,000 mile monthly limitations. These calculations did not include the effects of overtime. Mr. Perry concluded his testimony with a brief history of railway wage adjustments as applied to train and enginemen from 1917 to the present, following which he was excused without cross-examination.

Weekly Earnings—J. Elmer Monroe, assistant director, Bureau of Railway Economics, was the next carrier witness, presenting data as to the hours of service, compensation and number of employees in train, engine and yard service. For yard employees, Mr. Monroe said average weekly earnings rose from $36.28 during the last six months of 1921 to $43.55 in 1929, fell to $33.01 in 1933, increased to $44.14 in 1940 and reached an all-time peak of $61.98 during the first seven months of 1945. For road employees average weekly earnings were $42.64 during the last six months of 1921, $50.71 in 1929, slightly less than $40 in 1933, $52.22 in 1940, and $74.19 during the first six months of 1945.

Mr. Monroe said that for the operating group average straight-time rates of pay in 1941 were $.90 an hour with average earnings per clock hour of $1.094. In October, 1945, straight-time rates had risen to $1.10 an hour, while earnings had advanced to $1.32 hourly. In demonstrating how an increase in the wages per basic day pyramids to the benefit of road employees, Mr. Monroe said that studies show that these men receive on an average $130.6 per cent of their basic daily rate for each clock-hour actually worked, so that for each increase of 1 cent per hour in the basic rate, they receive an increase of 1.3 cents an hour based on their actual time on duty.

On the basis of service hours paid for in 1944, Mr. Monroe said that each increase of one cent an hour granted the operating employees will cost the carriers $10,583,000. If a similar increase is granted all employees the cost to the carriers will be $41,771,000, or, on the basis of 1941 hours paid for $30,328,000 for each cent per hour of increase, not including payroll taxes. Based on Dr. Parmelee's estimated payroll for 1946, a one cent an hour increase to all employees will cost the carriers $36,500,000, Mr. Monroe added.

Wage Comparisons—The final carrier witness for the day was Daniel P. Loomis, executive director, Association of Western Railways, and chairman, Western Carriers' Conference Committee, who presented data comparing the earnings of various groups of railway workers with those of other industries. Mr. Loomis said that for April, 1945, the month prior to V-E day, the average hourly earnings of railway wage workers was 98.4 cents compared with 104.4 cents for factory workers. For October, 1945, the second month after V-J day, railway workers average 97 cents an hour, a decline of 1.4 cents an hour, compared with 98.5 cents an hour for factory workers, a decline of 5.9 cents in hourly earnings. On the basis of weekly earnings, Mr. Loomis said that the average earnings of railway wage workers were $51.96 in April, 1945, compared with $47.12 for factory workers, while for October the railway employee earned $50.21 per week, as compared with $41.04 for the factory worker. Throughout the entire period from 1929 to date, Mr. Loomis said, the weekly earnings of railway wage workers averaged more than the weekly earnings of factory workers.

Mr. Loomis also presented to the board a comparison of annual earnings of railway employees and annual earnings of workers in private industries. On this basis he said that the average annual earnings of all Class I steam railroad employees were $2,726 in 1944, compared with $3,564 for train and engine service employees, and $2,189 for workers in all private industries, including the railways.

In his discussion of the prospective loss in take-home pay, Mr. Loomis said that weekly earnings of the operating group of railway employees was expected to decline to $59.69 in the post-war period from $68.16 which he said these men averaged in 1944. Factory workers, on the other hand, he said face a decline of just over $10 weekly, from $46.08 per week in 1944, to an estimated $36.02 in the future. Allowing for changed income taxe rates, he said that all railway workers, operating and non-operating combined, could anticipate a decrease in actual weekly take-home pay of $4.14 or 9 per cent, while for factory workers the prospective decrease was 17.1 per cent or $7.27 per week. As evidence to support his conclusions, he cited actual earnings of all railway workers of $51.01 in April, 1945, and of $49.39 in October, a decline of $1.62 or 3.2 per cent. At the same time, Mr. Loomis said weekly earnings of factory workers fell from $47.12 in April, 1945, to $41.04 in October, a decline of $6.08 or 12.9 per cent. For railway operating employees alone, the corresponding figures were weekly earnings in April, 1945, $68.63 in October, 1945, $65.21, a decrease of $3.42, or less than 5 per cent, and in November, 1945, weekly earnings of $66.07, a decline from April of 3.7 per cent.

No Post V-J Day Pattern—Mr. Loomis' testimony was completed at the hearing on March 29, at which time he told the board that there is no post V-J Day pattern of general wage increases either in percentages or in cents per hour, as claimed by the employees. Mr. Loomis analyzed the reports of presidential "fact-finding" boards in several recent wage disputes in an effort to show how the facts developed therein differed from those in the railroad industry. In general, Mr. Loomis sought to show that the workers in these industries faced larger losses in take-home pay than those on the railways and that their earnings, on a cents-per-hour basis, had not so nearly kept pace with the rising cost of living as had hourly earnings of railway workers.

The second carrier witness for the day was Thomas H. Carrow, superintendent of safety, of the Pennsylvania, who told the board of some of the causes of the wartime increase in the accident rate in the railway industry and outlined the factors which are now at work, which, he said, will bring about a reduction in the accident rate.

The next carrier witness was Dr. Jules Backman, an economist on the staff of New York University, who presented data with respect to various cost-of-living indices and budgets. When Dr. Backman attempted to present evidence as to the average number of persons in the family of railway employees, R. T. Miller, counsel for the labor organizations entered an objection on the grounds that in securing this data from information contained on the withholding receipts which the Federal tax laws require each employer to furnish to his workers, the carriers had violated the secrecy provisions of the Federal income tax laws. The board accepted the exhibit in which this information was shown and heard the testimony subject to the right to disregard this evidence if it rules that, in compiling this information, the carriers had violated the law. The board agreed to hear arguments of counsel in the matter and to rule on April 1.

Average Railroad Family—In the disputed testimony, Dr. Backman said that the average railway workers claimed 2.69 exemptions, or persons whom he supported including the worker himself. As a check on the accuracy of this figure, he said that

the average family as reported by the Bureau of the Census contains 1.3 wage earners and 3.64 persons, or 2.8 dependents per worker. Relating this to the "Heller" budget favored by the employers, he said that it overstates the income needs of the average family by assuming that a normal family consists of four persons.

After discussing the "Heller" budget, Dr. Backman turned to the Bureau of Labor statistics cost of living index, which he said had risen from 100.8 in January, 1941, to 128.9 in September, 1943, or 27.9 per cent, adding that a special committee appointed by the President had found this index to be somewhat low and finding that the actual increase in the cost of living to September, 1945, was 33 per cent. Dr. Backman said that the current level is about 5 per cent higher than the level of 1926.

There was no cross-examination of Dr. Backman, and the final witness in the wage phase of the carriers' case was L. W. Horning, vice-president personnel and public relations of the New York Central. Mr. Horning charged that the booklet entitled "Enemy Hours," which the employees had introduced in evidence "was prepared with malice and intended as a reckless criticism of railroad management rather than a constructive document which might aid in a solution of the industry's man-power problems."

Mr. Horning was speaking of the war period during which this pamphlet was first issued. He stated that on his road when the management attempted to substitute the "call" system for certain yardmen in New York City for the "show out" system in effect, the change was blocked by the very man who criticized the road for maintenance of the "show out" system in the "Enemy Hours" pamphlet.

Earnings of Junior Ops—The hearings on March 30 opened with a continuation of Mr. Horning's testimony. He presented, first, an exhibit designed to demonstrate the earnings of brakemen and firemen having not more than one year of service. He said that the average earnings of these junior employees were $158.02 in June, 1941; $237.97 in October, 1942; and $245.01 in November, 1945.

There followed an exhibit in which Mr. Horning outlined the compensation and details of service of representative train and enginemen on 15 representative railroads, five in each of the three regions. Also included in the exhibit was a recalculation of the earnings that would have accrued had the proposed wage increase of $2.50 per basic day been in effect and a statement of the number of employees having the same assignments and hence similar earning opportunities.

Earnings of passenger engineers shown on the exhibit ranged from $524.32 in one month on the Union Pacific, to a low of $356.20 in a month on the Baltimore & Ohio. He directed the board's attention to the earnings in October, 1945, of an engineman on the Seaboard between Wildwood, Fla., and Miami, who earned $428.15 for 88 hr. 25 min. on duty, or at the rate of $4.84 an hour. This man worked on only 16 calendar days during the month and was on duty a maximum of 5 hr. 50 min. in one day. Had the $2.50 wage increase requested been in effect, his total earnings would have been increased by $111.67 in the month for a total of $539.82, with an hourly earning of $6.11. An engineer on the Atchison, Topeka & Santa Fe, was shown to have earned $439.09 for 108 hr. 26 min. on duty, working a daily round-trip of 202 miles each way, and working only every other day and not at all during the first 10 days of the month. Had the increased rates been in effect, this man's earnings would have been $550.19.

$546 a Month—In the case of freight engineers, Mr. Horning showed monthly earnings ranging from a high of $546.38 on the New York, New Haven & Hartford, to a low of $347.90 on the Chicago, Milwaukee, St. Paul & Pacific. The earnings of passenger brakemen ranged from $348.50 on the Pennsylvania, to $259.27 on the Santa Fe. Freight brakemen had earnings varying between a high of $370.31 on the Union Pacific to a low of $226 on the Illinois Central.

Mr. Horning concluded his testimony with a discussion of the advantages of railroad employment. Advantages he listed were the almost universal application of the seniority system, privileged treatment with respect to retirement annuities and unemployment insurance, free transportation, greater stability of employment, opportunities for advancement and job protection in the event of mergers, consolidations or abandonments.

The N. Y. C. vice-president was followed by a succession of carrier witnesses who testified in support of the various changes in working rules sought by management. They included Earl B. Perry, manager of personnel, New York, New Haven & Hartford; F. B. Whitman, assistant general superintendent, Chicago, Burlington & Quincy; H. E. Greer, trainmaster, Illinois Central; Claude G. Wilcox, road foreman of engines, Pennsylvania; Bernard S. Sines, division superintendent, Southern Pacific; Frank W. Stoop, assistant to general manager, Pennsylvania, and L. L. Morton, assistant vice-president, Louisville & Nashville.

This comprehensive rules presentation was concluded at April 1's morning session, and the afternoon session of that day was devoted to special presentations made on behalf of the Central of New Jersey, Norfolk Southern and nine short lines.

National of Mexico Inaugurates Training Program

A far-flung teaching and training program, which is expected to affect 55,000 employees, has been inaugurated by the National Railways of Mexico. Courses in the operation of steam and Diesel locomotives, basic electricity and other subjects are now being taught both in classrooms and through correspondence lessons. Additional courses are expected to be added in the near future.

The program, which has been indorsed by the U. S. Railway Mission in Mexico, is based on a similar plan introduced several years ago by the Railway Education Bureau of Omaha, Neb.; the lessons have been translated into Spanish and adapted to Mexico's needs.

Several courses are mandatory, including one in administration, which is attended by 994 persons holding executive positions. This course also is open to men with high seniority ratings and those who seek promotions. Nominal fees are charged for instruction in several subjects, with the price depending on the wage of the employee.

Visual education has been the main reliance at the school's first classroom which was opened recently at Buenavista station in Mexico City. Machine parts and tools for demonstration purposes and motion picture equipment also have been installed in three mobile units, which will visit outlying districts and particularly maintenance-of-way workers, many of whom cannot read or write.

Freight Car Loadings

Loadings of revenue freight for the week ended March 30 totaled 809,142 cars, the Association of American Railroads announced on April 4. This was an increase of 4,536 cars, or .6 per cent, above the preceding week, a decrease of 26,858 cars, or 3.2 per cent, below the corresponding week last year, and an increase of 23,036 cars, or 2.9 per cent, over the comparable 1944 week.

Loading of revenue freight for the week ended March 23 totaled 804,606 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, March 23

District	1946	1945	1944
Eastern	162,107	163,805	157,966
Allegheny	175,991	182,219	170,967
Pocahontas	59,294	54,304	54,874
Southern	141,155	131,982	122,051
Northwestern	83,760	84,533	85,001
Central Western	118,604	125,451	117,961
Southwestern	63,695	74,447	68,758
Total Western Districts	266,059	284,431	271,720
Total All Roads	804,606	816,741	777,578
Commodities:			
Grain and grain products	43,457	45,841	43,261
Livestock	15,851	15,668	14,491
Coal	190,058	167,142	168,018
Coke	13,449	15,022	14,266
Forest products	41,657	39,605	43,588
Ore	10,316	17,879	14,492
Merchandise l.c.l.	125,021	110,403	106,716
Miscellaneous	364,797	405,181	372,746
March 23	804,606	816,741	777,578
March 16	799,882	816,556	785,195
March 9	786,202	767,055	780,265
March 2	782,397	785,736	786,893
February 23	723,281	772,396	780,984
Cumulative Total, 12 weeks	8,923,417	9,242,230	9,442,747

In Canada.—Car loadings for the week ended March 23 totaled 71,104 cars as compared with 71,372 for the previous week and 67,270 cars for the corresponding week last year, according to a compilation by the Dominion Bureau of Statistics.

Totals for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
March 23, 1946	71,104	38,804
March 24, 1945	67,270	38,684
Cumulative Totals for Canada:		
March 23, 1946	793,596	421,381
March 24, 1945	783,621	441,009

Fire Protection Assoc. Plans 50th Anniversary Meeting

The National Fire Protection Association will hold its fiftieth anniversary meeting in Boston, Mass., June 3 to 7. The announcement by General Manager Percy Bugbee recalls that the Association was

born in Boston 50 years ago when "a small group of public spirited New Englanders" met and "declared war on fire."

Now the international clearing house for all information that is authoritative on the subject of fire protection and fire prevention, the Association operates through various sections, including the Railroad Section which was organized in 1944. Its membership includes over 150 national organizations and more than 10,000 individuals.

Alton Reorganization Plan Given Tentative Approval

Federal Judge John P. Barnes, Chicago, on March 30, gave tentative approval to the reorganization plan for the Alton, which plan was prepared by the Gibbons Committee for the protection of 3 per cent refunding mortgage bond holders, of which committee Stephen Gibbons was chairman. The plan had previously been approved by the Interstate Commerce Commission and had been certified by that body to Judge Barnes' court for further hearings.

In rendering his opinion, Judge Barnes said that no objections had been filed in his court to this plan and that it had his approval, subject to consideration of fees and allowances for which the I. C. C. had not yet set limits. Judge Barnes criticized the plan on the grounds that it did not merge with the parent company, three subsidiary lines, the Joliet & Chicago, the Louisiana & Missouri and the Kansas City, St. Louis & Chicago, a matter which he thought might lead to future difficulties. However, he said that since the plan was in other respects a good one, and since it appeared to be satisfactory to all concerned, it had his tentative approval.

In Washington, D. C., the I. C. C., on April 4, held hearings at which the various interests presented their claims for fees and allowances. Court hearings on these claims were set by Judge Barnes for April 29, in Federal District Court in Chicago.

Want Tariffs with Aggregate of Intermediates Alternative

An application has been filed by W. J. Kelly, chairman of the committee on freight tariffs of the Association of American Railroads, asking the Interstate Commerce Commission to issue a general special permission to authorize publication in tariffs of rules providing for alternation of aggregate of intermediate rates with through rates and for the equalization of such rates by other than rate-making routes.

The effect of this general special permission, according to the application, would be to continue in effect the more than 100 special permissions issued over a long period of years which authorize alternate application of aggregate of intermediates rules of several types. The expiration dates of these permissions was extended to May 31 by a blanket amendment dated January 4.

After reciting the difficulties that shippers and agents of carriers may experience in checking possible combinations of rates to determine the lowest available, the application explained that "what the railroads desire to accomplish is to continue in their tariffs aggregate of intermediates rules which will keep open service routes and permit application of combinations via the route used or via other available routes, whether discovered before or after the shipment moves. The method of publication herein proposed is the only practical manner in which to accomplish equalization of combination rates. It will place no undue burden upon the shipping public. It is only through this method of publication that it is practicable to avoid depriving the public of the use at all times of existing service routes or depriving the carriers of the right to compete at equal rates in the many instances in which lower aggregates of intermediates otherwise would be applicable only via routes over which such rates are made."

The application went on to suggest an informal conference where shippers and carriers might present their views on the aggregate of intermediates rule.

Rail Institute Hears Fletcher Call for More Research

An uninterrupted continuance of a "fresh endowment of new blood with a spirit of research to make the railroads the backbone of American transportation" was proposed by R. V. Fletcher, vice-president in charge of research of the Association of American Railroads, in a commencement dinner address to the graduating class of the Rail Transportation Institute in Washington, D. C., on March 29. Thirty-seven students, including 14 veterans, received certificates from Dr. Paul F. Douglass, president of American University, where the four-week course was conducted.

Judge Fletcher declared that in spite of expansive and intensified programs carried out by the railroads during the past 25 years, they "have not done enough research in the real sense of the word." In outlining the work of the A. A. R., he pointed out that "railroad research takes place everywhere, and involves studies, studious examination and critical and exhaustive investigations."

The A. A. R. vice-president, a member of the university's board of trustees, also announced plans for similar institutes dealing with the nation's carriers, including air and motor transportation.

Dr. Douglass, in a brief address, warned that the railroads should be in "top shape" for the "next emergency." He told the students that the "technical competence which goes into industry must rise above the individual's own technical ability." Thomas E. Burke, of the Chicago, Rock Island & Pacific, president of an alumni association formed by the graduates, served as toastmaster and on behalf of the class paid tribute to Dr. L. M. Homberger, director of the institute.

Senator Clyde M. Reed of Kansas and Representative Carl Hinshaw of California were speakers at an informal supper meeting of the institute March 28. In his discussion of "Transportation from a Legislative Standpoint," Sen. Reed declared that "next to production, transportation is the most important economic function" in the world. The speaker, a member of the Senate interstate commerce committee, explained that the Transportation Act of 1920 was "a long step toward the present scheme of transportation." He also traced the history of the Interstate Commerce Commission and stressed the importance of the various I. C. C. acts on present-day transportation practices.

Mr. Hinshaw, a member of the House interstate and foreign commerce committee, told the gathering that the "merchandise traffic industry is one of the largest in the United States," adding that "from ten to 15 tons of freight are moved annually for every man, woman and child."

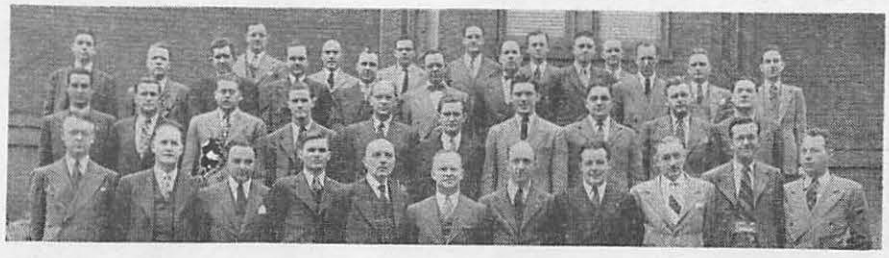
He explained how it was found necessary to integrate the nation's transportation systems, notably the railroads, in order to move freight, and described the problems encountered in the 1870's by the Empire Fast Freight, which used four separate lines to haul goods between New York and Erie, Pa. Describing the general transportation picture in this country, he commented on the huge expenditures of the federal government for water, highway and air transport, for which, with the exception of highways, there is no reimbursement to the government, he emphasized.

Railroads represented by students at the institute included the Atlantic Coast Line; Baltimore & Ohio; Bangor & Aroostook; Denver & Rio Grande Western; Gulf, Mobile & Ohio; New York Central; Minneapolis & St. Louis; New York, New Haven & Hartford; Norfolk & Western; Pere Marquette; Pittsburgh & Lake Erie; Reading; Chicago, Rock Island & Pacific; and Toronto, Hamilton & Buffalo, and also the General Electric Company, Erie, Pa.

N. Y. C. Operating "Farm and Home Special" in New York

A "Farm and Home Special" train, operated by the New York Central in cooperation with Cornell University and featuring displays of the latest developments in research to improve farm production and home living, opened a tour of New York state with a dedicatory exhibit in Syracuse on April 1.

"Increased farm production is an important concern of our railroad, because bigger incomes to the farmers means better business to New York Central," said G. Metzman, president of the N. Y. C.,



Graduating class of American University's Rail Transportation Institute. Dr. L. M. Homberger, director, is fifth from left in the front row

in announcing the road's cooperation in exhibiting the special train. "The many exhibits on the 'Farm and Home Special' will offer profitable aid to farmers who wish to take advantage of newly-developed labor saving methods and practices of achieving increased production."

Specialists from the state colleges of agriculture and home economics at Cornell University will accompany the train and explain the exhibits, answer questions, and be prepared to describe some of the new things in research that may be widely adopted by farmers and homemakers. E. J. Leenhouts, general agricultural representative and live stock agent of the N. Y. C., is in charge of the train. The exhibits are contained in eight cars. Individual cars feature a model tenant house, remodeled farm houses, examples of roofing, repairs of the farm home, efficient use of storage space with cupboards, home freezers, compressor, packaging unit, and similar interests for the homemaker.

Forecast 2nd Quarter Loadings 4.2 Per Cent Under '45

Freight car loadings in the second quarter of 1946 are expected to be 4.2 per cent below actual loadings in the same quarter in 1945, according to estimates compiled by the 13 Shippers' Advisory Boards.

On the basis of those estimates, loadings of the 30 principal commodities will be 7,425,689 cars in the second quarter of 1946, compared with 7,753,496 actual loadings for the same commodities in the corresponding period last year. Five of the 13 boards estimate an increase in loadings for the second quarter, but eight estimate decreases.

Shippers' Advisory Boards	Actual Loading Second Quarter 1945	Estimated Loadings Second Quarter 1946	Per Cent Decrease
New England	107,705	121,378	12.7—in.
Atlantic States	663,016	678,594	2.3—in.
Allegheny	1,087,387	1,056,039	2.9
Ohio Valley	971,632	987,890	1.7—in.
Southeast	896,107	863,746	3.6
Great Lakes	500,112	507,333	1.4—in.
Central Western	267,626	233,658	12.7
Mid-West	940,888	914,630	2.8
Northwest	706,860	660,843	6.5
Trans-Missouri-Kansas	386,344	387,044	0.2—in.
Southwest	651,887	449,731	27.0
Pacific Coast	362,826	340,460	6.2
Pacific Northwest	247,106	224,343	9.2

The 13 boards expect an increase in the second quarter of 1946, compared with the same period one year ago, in the loading of 15 of the commodities listed, and a decrease in 15. Among those showing the greatest increases are the following: Automobiles and trucks, 81.8 per cent; cement, 25 per cent; brick and clay products, 16.1 per cent; lime and plaster, 9.8 per cent; gravel, sand and stone, 9.6 per cent; agricultural implements and vehicles other than automobiles, 7.4 per cent; fresh vegetables other than potatoes, 5.4 per cent; sugar, syrup and molasses 4.0 per cent; cotton, 3.9 per cent; live stock, 3.7 per cent; paper, paperboard and prepared roofing, 2.5 per cent; and coal and coke, ½ of 1 per cent.

Commodities for which decreases are estimated include the following: chemicals and explosives, 34.8 per cent; petroleum and products, 31.9 per cent; cotton seed and products except oil, 16.7 per cent; machinery and boilers, 14.2 per cent; ore, 13.6 per cent; flour, meal and other mill products, 8.7 per cent; hay, straw and alfalfa, 7.9 per cent; citrus fruits, 7 per cent; grain, 6.8 per cent; iron and steel, 6.2 per cent; and lumber and forest products, 5.3 per cent.

Pamphlet Annual Report Issued by New York Central

The New York Central has presented its annual report to the stockholders for 1945 in a pamphlet, printed in two colors, with cover design showing four new dual-purpose Niagara-type locomotives. In addition to illustrations of the company's trains and equipment, there are numerous graphs, showing at a glance the detail of the year's operations and other information. An innovation is a pictorial abbreviated balance sheet. Another illustration shows graphically how the company's income dollar was earned and used in 1945.

Operating revenues in 1945 amounted to $654,363,799 as compared with $714,963,385 in 1944. There was a considerable falling off in the volume of freight traffic in the latter part of the year, due to a substantial reduction in the shipment of war materials and to a decrease in the movement of raw materials and finished products as a result of labor difficulties in a number of the major industries in the territory served. Net income amounted to $24,412,525, or $3.79 per share, as compared with $35,789,939 last year. Current assets exceeded current liabilities at December 31, 1945, by $149,784,642.

In the report, Gustav Metzman, president, said that the steady reduction of the outstanding debt of the railroad and its lessor companies continued in 1945, despite the necessity of financing sizable acquisitions of new equipment. A gross reduction during the year of $22,065,060 was partially offset by the issue and sale of obligations amounting to $17,654,240, representing principally a part of the purchase price of new equipment. The net reduction in capital obligations during the year amounted to $2,773,756. Since 1932, there has been a net reduction of $253,401,420, or 22.9 per cent, in total outstanding capital obligations.

B. & O. Installs Ticket Dispensing Machines

The Baltimore & Ohio has installed three newly-developed ticket selling machines in its Camden station at Baltimore, Md. The machines, electrically operated, are about the size of a small cash register, two being used for one-way tickets, and the other for return trip tickets.

Each will print and issue tickets between Baltimore and 100 other different stations on the B. & O. and the entire job is completed by the operator through the pressing of a few keys. The machines also make an accounting record of the transaction.

The new machine has been developed by the National Cash Register Company in cooperation with the B. & O. and other roads, and it is expected that it will be installed in the principal B. & O. ticket offices as soon as it gets into production.

Rail Institute Students Form Alumni Association

An organization known as the Rail Institute Alumni Association, composed of 37 railroad employees who were enrolled in the Rail Transportation Institute at American University, Washington, D. C., was activated last week, prior to the conclusion of the four-week course.

Officers elected include Thomas E. Burke, Chicago, Rock Island & Pacific, president; F. Hartley Woolfall, New York Central, vice-president; A. M. Brinker, Baltimore & Ohio, secretary, and Jack Hause, General Electric Company, Erie, Pa., treasurer.

Public Relations Award Given Three Railroads

The Southern Pacific, New York, New Haven & Hartford and Southern each were awarded a miniature "anvil of public opinion" for an outstanding performance in the field of public relations last year at a ceremony March 30 at Washington, D. C., sponsored by the American Public Relations Association. A similar award was made to the American Trucking Associations and to firms in other industries.

The 8-man panel of judges deciding the awards included Stephen T. Early, vice-president of Pullman, Inc., and Robert S. Henry, assistant to the president of the Association of American Railroads.

D. L. & W. Issues 1945 Report for Employees

Delaware, Lackawanna & Western employees have received from President William White an especially-prepared report on that road's operating results for 1945, including a brief resume of results for the whole 1941-1945 war period. The report is embodied in an attractive, easily-read pamphlet; and while nothing spectacular is attempted typographically, the subject matter is carefully chosen from the standpoint of employee interest.

The discussion is a candid one, as indicated by President White's comment on fuel costs. In urging the employees to strive for the most economical use of fuel, he says that the Lackawanna's fuel consumption per 1000 gross ton-miles "doesn't compare favorably with our neighboring railroads."

Meanwhile Mr. White had set forth the 1945 results in aggregate amounts and on a per-dollar-of revenue basis, explaining that the deficit of $3,292,144.91 was due to abnormal charges of $7,673,988, which included the expedited amortization of war facilities and New Jersey taxes and interest applicable to prior years. The breakdown

on the per-dollar-of-revenue basis showed that wages and salaries took 47.83 cents of the 1945 revenue dollar, while taxes took 11.15 cents.

Later on Mr. White showed the New Jersey taxes, "which per mile of road are much in excess of any other state in the union." In the five years, 1941 through 1945, the Lackawanna has paid $15,606,215 to New Jersey for back taxes and interest applicable to prior years; and $15,568,033 for current taxes. The report points out that this total of $31,174,248 compares with total passenger revenues of $27,599,531 realized during the same five years from operations in the territory Dover, N. J., and east.

The brief resume of 1941-1945 operations showed that out of total revenues in those years of $366,311,732, the Lackawanna realized net income of $10,304,977, which Mr. White said "isn't much" in relation to the gross. He added, however, that meanwhile "we got our 'house in order' by paying up all of back taxes and effecting the mergers of our leased lines." Mr. White stressed that only the heavy volume of war traffic enabled the railroads to carry on without a rate increase in the face of increasing labor and material costs. He added that the drop in volume and the tendency of costs to go higher now make a freight rate increase "inevitable."

He also emphasized the mutuality of interest between stockholders and employees. "Our stockholders," he said, "have not had a dividend since 1931. Many employees are stockholders. Stock ownership represents capital, and capital is also entitled to a wage. Our goal is to get back on a dividend-paying basis. Every employee whose job and wages are made possible by the investment of capital in our company should do everything within his power to attain that goal."

Philco to Produce Mobile Telephones

The Philco Corporation, Philadelphia, Pa., has announced plans to produce and sell a complete line of mobile radio-telephone equipment to provide dial telephone service in automobiles, trucks, buses and taxicabs, as well as police and fire equipment.

John Ballantyne, president, Philco Corporation, states: "It is expected that, with this equipment and the proper central station installations, the average motorist, bus, truck or taxi driver will be able to call his home or office, while driving along the highway, merely dialing the correct number. The system also promises to bring telephone service quickly and economically to many remote areas without the installation of telephone poles and wires."

Club Meetings

The New Jersey Industrial Traffic League will hold its twenty-fifth anniversary dinner on April 13, 6:30 p.m., at the Robert Treat hotel in Newark.

The Atlantic States Shippers Advisory Board will meet in Rochester, N. Y., April 10 and 11, at the Seneca hotel. On April 11, the Transportation Club of Rochester will hold a luncheon in connection with the advisory board meeting (also at the Seneca hotel) at which Basil Harris, chairman of the board of the United States Lines Company, will be guest speaker.

The Eastern Car Foremen's Association will meet April 12 at the Engineering Societies Building, New York City, at 8 p.m. Clarence E. Hatch, assistant chief mechanical inspector of the New Haven, will discuss "Methods of Test and Examination of Steel."

Experimental I. C. Reefer

During this month there will be under test in commercial use on the Illinois Central the first railroad-owned refrigerator car in the country experimentally insulated against heat and cold by cotton, according to W. A. Johnston, president of that road. Such insulation will be applied to Illinois Central express refrigerator car No. 4790 in the McComb, Miss., car shop.

This is a standard car with insulation problems typical of the more than 2,200 freight and express refrigerators owned by the railroad. The cotton used is especially treated to be flameproof, sterile, immune to rot, mold or fungus and non-absorbent to moisture. It is formed into batts of various thicknesses and is surfaced with kraft paper and aluminum foil, the latter for heat reflection and added air and moisture protection.

2 Months Net Income Was $60,000,000

(*Continued from page 730*)

mated net income was $5,000,000 compared with $12,166,204 in February, 1945. The two months net railway operating income in the Eastern district was $42,698,239 compared with $54,831,244 in the same period of 1945. The net railway operating income in February amounted to $18,569,495 compared with $28,425,828 in February, 1945.

Gross in the Eastern district in the two months totaled $533,070,090, a decrease of 13.8 per cent compared with the same period of 1945, while operating expenses totaled $433,164,716, a decrease of 9.3 per cent.

Class I roads in the Southern region in the two months had an estimated net income of $12,000,000 compared with $17,556,916 in the same period of 1945. For February, they had an estimated net income of $6,000,000 compared with $7,983,845 in February, 1945.

Those same roads in the two months had a net railway operating income of $23,584,005 compared with $27,559,511 in the same period of 1945. Their net railway operating income in February amounted to $12,537,366 compared with $13,635,199 in February, 1945.

Operating revenues in the Southern region in the two months totaled $177,819,222, a decrease of 19.6 per cent compared with the same period of 1945, while operating expenses totaled $131,469,220, a decrease of 6 per cent.

In the West—Class I roads in the Western district in the two months had an estimated net income of $33,000,000 compared with $38,377,056 in the same period of 1945. For February, they had an estimated net income of $15,000,000 compared with a net income of $17,228,198 in February, 1945.

Those same roads in the two months had a net railway operating income of $62,377,118 compared with $68,314,998 in the same period of 1945. Their net railway operating income in February amounted to $26,710,105 compared with $32,602,576 in February, 1945.

Operating revenues in the Western district in the two months totaled $509,124,593, a decrease of 18.4 per cent compared with the same period of 1945, while operating expenses totaled $375,646,236, a decrease of 8.8 per cent.

CLASS I RAILROADS—UNITED STATES

	1946	1945
Month of February		
Total operating revenues	$579,142,025	$712,404,097
Total operating expenses	440,221,092	499,458,376
Operating ratio—per cent	76.01	70.11
Taxes	59,902,120	125,749,789
Net railway operating income (Earnings before charges)	57,816,966	74,663,603
Net income, after charges (estimated)	26,000,000	37,378,247
Two Months Ended February 28, 1946		
Total operating revenues	$1,220,013,905	$1,463,316,074
Total operating expenses	940,280,172	1,029,503,729
Operating ratio—per cent	77.07	70.35
Taxes	129,125,827	256,212,275
Net railway operating income (Earnings before charges	128,659,362	150,705,753
Net income, after charges (estimated)	60,000,000	76,424,773

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

ALLIED RAILWAY SUPPLY ASSOCIATION. — J. F. Gettrust, P. O. Box 5522, Chicago 80, Ill. Exhibit in connection with meetings of Coordinated Mechanical Associations, September 4-6, 1946, Hotel Sherman, Chicago, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, June 6-8, 1946, Hotel Stevens, Chicago, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 17-19, 1946, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—O. K. Quivey, B. & O. R. R., Baltimore 1, Md. Annual meeting April 10-11, 1946, Benjamin Franklin Hotel, Philadelphia, Pa.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Virginia Tanner, Baltimore & Ohio Magazine, Room 1202, B. & O., Bldg., Baltimore 1, Md.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. P. Nye, Tower Bldg., Washington 5, D. C. Annual meeting, October 2-3, 1946, Morrison Hotel, Chicago, Ill.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y.
Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN TRANSIT ASSOCIATION.—A. W. Baker, 292 Madison Ave., New York 17, N. Y.

AMERICAN WOOD-PRESERVERS' ASSOCIATION. — H. L. Dawson, 1427 Eye St., N. W., Washing-

ton 5, D. C. Annual meeting, April 23-25, 1946, Netherland Plaza Hotel, Cincinnati, O.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—H. S. Whited, 5th & T Sts., N. E. Washington 2, D. C.

ASSOCIATION OF AMERICAN RAILROADS. — H. J. Forster, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—Clark Hungerford, Vice-President, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division. — L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y.

Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York 17, N. Y.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, October 14-16, 1946, New Ocean House, Swampscott, Mass.

Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 20-21, 1946, Congress Hotel, Chicago, Ill.

Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 22-24, 1946, Hotel Sherman, Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June 20-21, 1946, Palmer House, Chicago, Ill.

Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, May 21-23, 1946, Hotel Sherman, Chicago, Ill.

Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Car Service Division.—E. W. Coughlin, (Assistant to Chairman), Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, June 18-21, 1946, Mount Washington Hotel, Bretton Woods, N. H.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.

Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Alton R. R., 340 W. Harrison St., Chicago 7, Ill. Annual meeting, June 5-6, 1946, Hotel Pfister, Milwaukee, Wis.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill. Exhibit in conjunction with American Railway Bridge & Building Association Convention, September 17-19, 1946, Hotel Stevens, Chicago, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 4-6, 1946, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Ralph J. Feddor, 2803 N. Campbell Ave., Chicago 18, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMAN'S ASSOCIATION. — W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St. New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, North Little Rock, Ark. Annual meeting September 4-6, 1946, Hotel Sherman, Chicago, Ill.

MASTER BOILER MAKERS' ASSOCIATION. — A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting September 4-6, 1946, Hotel Sherman, Chicago, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, November 12-15, 1946, Los Angeles, Cal.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—W. B. Shepherd, Aluminum Company of America, Gulf Bldg., Pittsburgh 19, Pa. Annual meeting, October, 1946.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago 4, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB. — D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION. — E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — William S. Wollner, P. O. Box 458, San Rafael, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Calif.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill. Next meeting, October 22-24, 1946, Chicago, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill. Annual meeting, September 4-6, 1946, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury, Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo. Annual meeting, May 28-29, 1946, Netherland Plaza Hotel, Cincinnati, O.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 17-19, 1946, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E. Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—D. W. Brantley, C. of Ga., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

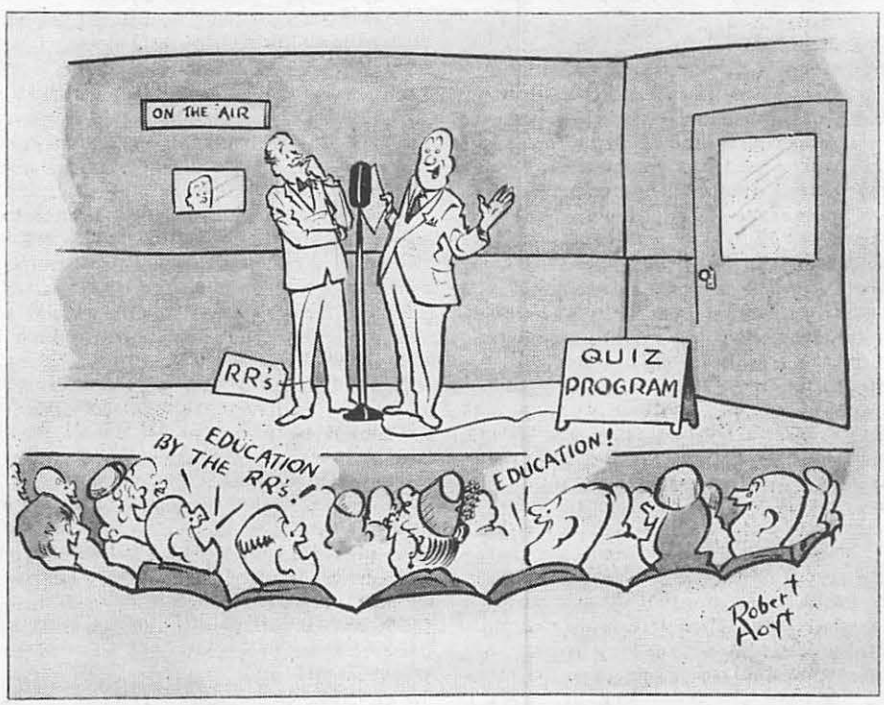
TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill. Exhibit in connection with Roadmasters' and Maintenance of Way Association Convention, September 16-19, 1946, Hotel Stevens, Chicago, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y. Annual meeting, October 12-13, 1946, Baltimore, Md.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

* * *

Please—No Prompting from the Audience



"Since railroad employees believe the railroads earned 27 per cent when they actually earned only 4 per cent, what can the railroads do about it?"

With the Government Agencies

Committee Would Bail Out Equities

Approves Reed House bill that gives "solvent" roads way to escape section 77

The House Committee on the judiciary on April 2 recommended passage of H.R. 5924, a bill introduced by Representative Reed, Republican of Illinois, which would enable railroads undergoing reorganization, whose properties during a period of 7 years have provided average annual earnings sufficient to pay fixed charges, to effect a readjustment of their financial structure without further proceedings under section 77 of the Bankruptcy Act.

"From the information available to your committee," the report said, "it is obvious that some additional legislaton is necessary to emancipate our presently solvent railroads yet in bankruptcy from administrative and judicial control and to restore them to their rightful private owners and managers. Congress should not by its failure to act promptly in this cause continue to be a party to the wholly unnecessary destruction, by administrative and judicial interpretations never intended by the Congress, of many hundreds of millions of dollars of private capital invested in our railroads.

Supplements Hobbs Bill—The recommended bill is a substitute for H.R. 4779, also introduced by Mr. Reed, the principal difference being a provision in the approved version excepting from its effect companies where more than 90 per cent of the stock was owned or controlled by another railroad at the time the reorganization proceedings were instituted. The present measure is supplemental to the Hobbs bill (H.R. 37), passed by the House in February, 1945, and pending in the Senate interstate commerce committee, along with another bill (S. 1293) introduced by Chairman Wheeler of that committee and recently the subject of extended hearings. The Hobbs bill, the report pointed out, proposes standards below which the capitalization of reorganization roads could not be reduced, and thereby would operate to preserve the interests of junior creditors and equity holders in case any railroad failed to accomplish a debt readjustment under the Reed bill's provisions.

The Reed bill requires the court in charge of a reorganization to return a property to its owner, on application by any party to the proceedings, upon a showing that during the latest seven preceding years it has had average annual earnings sufficient to pay its fixed charges during those years. The owning company is then required to effect a voluntary adjustment of its debt and thus secure discharge from bankruptcy. If this is not accomplished within 18 months, or a longer period subject to the discretion of the court, the section 77 proceedings may be resumed.

"Under existing law," said the report, "those of our railroads that once found it necessary to have recourse to what Congress intended as beneficial legislation find themselves enmeshed in highly technical legal intricacies from which they are prevented from extricating themselves not because they are unwilling or financially unqualified, but because of forces beyond their control—because of the inadequacy of existing law.

Would End "Needless Sacrifices"—"Apparently no legal method exists for our railroads to get out of bankruptcy promptly, other than by acquiescence in pending reorganization plans which greatly impair the interests of junior bondholders and entirely eliminate the enormous investments of stockholders. It would shock the public conscience and tragically weaken all railroad credit if further wholly needless sacrifices of American railroad investments are permitted to occur. . . .

"Although express provisions for the greatest flexibility in adjustment, extension, and composition are contained in section 77," the report went on to say, "the Interstate Commerce Commission has practically never had recourse to them except to promote its own plans. . . . Although all these laws were intended by Congress for the preservation of our railroads and their ownership, the theory has appeared to prevail that the capitalization of companies in section 77 proceedings should in all cases be drastically reduced. That is what has been done consistently and persistently. . . . Countless thousands of small sotckholders already have been wiped out, and . . . there are many more thousands upon thousands of such stockholders whose investments are imminently threatened with a like fate, unless Congress promptly enacts legislation to prevent such needless loss.

According to the committee, "this tragic, unintended consequence of a law enacted for the relief of depression-stricken debtor railroads resulted primarily from the Interstate Commerce Commission construing and applying the statute in a manner to make its estimate of future earnings of the roads the controlling factor in determining their limit of permissible capitalization. . . . The depressing fact is that the forecasts of earnings upon which the commission largely predicated its plans of reorganization were later proved to be too low by shockingly wide margins. . . . The result has been to eliminate or gravely jeopardize more than $2,000,000,000 of private investments in those railroad properties. . . . The thousands of little men and women who had demonstrated their faith in American railroads by investing their savings in rail securities found their property uselessly destroyed by government fiat. This should

(*Continued on page 743*)

A.A.R. Is Assailed by Governor Arnall

He says passage of Bulwinkle bill would end case before the Supreme Court

Governor Ellis Arnall of Georgia lived up to all advance notices this week when he appeared before the Senate interstate commerce committee in opposition to the Bulwinkle bill, H. R. 2536. In three hectic days of testimony ending April 3, the Georgia chief executive presented his arguments and his evidence condemning the proposed legislation and particularly the Association of American Railroads. The hearings are expected to continue through next week.

The governor vigorously asserted that passage of the bill, which would exempt carrier joint rate-making conferences from anti-trust prosecution, would automatically "toss out of court" the case now before Lloyd Garrison, special master for the Supreme Court, in which the state of Georgia is charging 20 railroads with conspiracy in rate-making in violation of the anti-trust laws.

"Flaunts" I. C. C. Orders—In his plea to prohibit "immunization" of the railroads from anti-trust measures, Mr. Arnall accused the A. A. R. of being responsible for the "monopolistic practices" of the railroads, and also charged that the A. A. R. "thumbs its nose at the Interstate Commerce Commission and Congress" and "flaunts" their orders. Senator Wheeler, committee chairman, reminded the speaker that the commission has the power to enforce its orders, but declared that "we need a new commission" if the I. C. C. permits the A. A. R. to "flaunt" its orders.

Criticizing the "lobbying" activities of the A. A. R., the governor introduced a letter which he said was sent by J. J. Pelley, president of the A. A. R., to the "Great Western," in which Mr. Pelley allegedly warned that road of "intensive retaliatory actions" should it proceed independently. Although present at the hearing, Mr. Pelley offered no comment. The correspondence attributed to him was written in 1935, about the time of the association's inception.

Charging that railroads are "penalized" by the diversion of traffic if they do not comply with A. A. R, requirements, Governor Arnall said that the association is "robbing individual railroads of their right to appeal rates to the I. C. C." He declared that the railroads' violation of free competition could be eliminated only by "breaking up the A. A. R." and not by amending the Interstate Commerce Act, as was suggested by Senator Reed. He agreed with the Kansas legislator that the

A. A. R. "does many useful things," but insisted that its power is "too strong."

The "Railroad Lobby"—"The railroad lobby," he added, "has the number of every Congressman and backed by the A. A. R. can push the Bulwinkle bill through Congress without attracting public attention." He continued that "each railroad pays for lobbying on a mileage basis," a matter which Senator Wheeler said he was "quite familiar with."

The governor also described R. V. Fletcher, former general counsel and now vice-president, research, of the A. A. R., as "one of the principal architects of the new order." He said that Judge Fletcher had "serious apprehension that the railroads were violating the anti-trust laws" and read to the committee letters allegedly written by the A. A. R. counsel in 1934 to transportation bureaus and chambers of commerce calling for the "building of a foundation for the nation-wide railroad lobby."

In one letter which was introduced, Mr. Arnall held that Judge Fletcher had suggested that railroads enter into "gentlemen's agreements" with respect to rates. He considered such phraseology a plan to "blot out competition" and prevent railroads from taking independent action.

Calls Witnesses "Paid Workers"—"I'm interested in knowing who paid the expenses of witnesses to come to Washington to testify in behalf of the Bulwinkle bill," the governor said. He asserted that many of the witnesses are merely "paid workers" who "front" for the railroads, and accused the A. A. R. of inserting some "dubious witnesses" to "shadow-box" in connection with the hearings.

"The railroad lobby," he insisted, "is one of the most gigantic organizations to exert economic pressure this country has ever seen and there is no reason why free enterprise and competition should not exist so that the big railroads will not 'gobble up' the small roads."

In his opening remarks on April 1, the governor declared that prejudicial freight rates, which he credited to the "conspiracy" and the rate-making procedures of the railroads, prevented the South from progressing industrially, in addition to threatening the movement to the North of many of its present industries. He said that in spite of its proximity to raw materials and comparatively lower labor costs, the South was "hemmed in" by the existing freight rates, some of which he said show a 39 per cent differential. He added that he had conferred on the matter with the late President Roosevelt, who, he said, encouraged Georgia's suit against the railroads.

Sees Shippers "Threatened"—Mr. Arnall said that shippers are supporting the Bulwinkle bill because "they are threatened by the railroads and are afraid to buck the economic power of the A. A. R."

"The A. A. R. can determine what states shall and shall not have railroads," he continued, adding that "the A. A. R. controls the price of every article that moves by railroad or truck and is therefore robbing the consuming public." He declared that the South has its average number of "quislings" and in reply to Senator Hoey (Democrat of North Carolina) asserted that the main purpose of the bill is "to defeat the Georgia case in the Supreme Court." He also protested the "secret conferences" of the railroads when determining rates, declaring that "proceedings of such meetings should not be hidden from the public."

In summing up the "lobbying activities" of the A. A. R. and individual railroads, in which he mentioned "huge financial gifts" from the Pennsylvania and Southern Pacific to chambers of commerce in Philadelphia, Pa., and Portland, Ore., respectively, Mr. Arnall suggested that the Senate committee investigate the files of the A. A. R. in order to reveal its activities to the general public. Senator Wheeler, however, said that "such records probably are now destroyed."

Spends to "Hoodwink Public"—"The records would disclose how much the A. A. R. has spent and is spending to hoodwink the public," the governor remarked, condemning railroad lawyers and executives, shippers and regulatory officials for their practices.

"The A. A. R., through rate-making bureaus, has nullified the right of the railroads to appeal to the I. C. C.," he continued, stating that the railroads "give up that privilege" when they join the A. A. R.

Senator Wheeler declared that the Bulwinkle bill, as it now stands, "should be amended," but he added that if rate bureaus weren't permitted to prepare tariffs, "chaotic conditions" would result. He also called for a further investigation of all "pro and con facts" by the commission before rendering a decision on carrier joint agreements.

The governor said he disagreed "in toto" with the Bulwinkle bill and hoped no action would be taken on it until the cases pending in the Supreme Court and at Lincoln, Neb., are settled. He said the only amendments to the bill that he would consider would be those effecting "fair competition" and the "elimination of secret meetings" by the railroads.

Fears "Swindle" of South—"If the bill is passed," he continued, "it will legalize basic conspiracy and provide immunity from some parts of the anti-trust laws. It will enable the northern railroads to swindle the South and West. The anti-trust laws should apply to the big and little alike, or else we should favor monopolies."

Citing what he called A. A. R. rate directives covering copper, wine, logs and tin plate, which rates he claimed were extremely harmful to Southern industrialists, the Georgia governor said that "if we, the South, have a commodity and it's going to compete, we don't stand a chance to get a fair rate." He said the eastern railroads' control on rates hinders industrial development in other sections of the country, to which Senator Wheeler added that "railroads and shippers often get together to improve their own particular interests and, through rate-making procedures, keep out competition at the same time."

Mr. Arnall also criticized the A. A. R. for several other alleged practices, including the issuance of a "directive" which informed railroads "not to advertise in charitable publications." As an example, he cited the program in conjunction with the annual President's Birthday Ball.

"I'm appearing in the interest of the people of the United States, all of whom are entitled to fair treatment," he said, adding that his appearance was not sectional and that he sought a "cohesion of sections" by eliminating "colonial regions." "Passage of the Bulwinkle measure would validate the entire organization of the A. A. R. and their rate bureaus to defraud the public," he continued, pointing out that H.R. 2536 was the "fifth attempt" by the railroads to exempt themselves from anti-trust legislation.

Let "Judicial Mills Grind"—"Shippers can establish and facilitate rates by letting the 'judicial mills grind,'" he said, remarking that conference-made rates between air and water carriers apply only to foreign and not to domestic commerce. "The Bulwinkle bill will legalize the mode, method and mechanism of rate-fixing," the governor protested, "and this cannot occur if we want private enterprise to remain strong." He advocated that railroads should be a "free competitive enterprise" after Senator Hawkes, Republican of New Jersey, had remarked that "railroads are a mixture of government control and free competitive enterprise."

The witness said that he hoped to prove in the Georgia case now in court that the railroads violated the anti-trust laws by fixing transportation rates, dominating and controlling all rail movements through economic coercion and dominating and controlling competitive rail rates through coercion between the railroads of the North and South. "We will win the case," he predicted, "unless the Bulwinkle bill is passed," claiming that a Supreme Court decision in his favor would "delineate the field in which railroads can confer on rates."

Conference Method Necessary — Senator Reed expressed belief that "there is no other possible way to make rates than under the present conference procedure" and that "if that method is proven illegal, the laws should be clarified." He also stated that shippers are in favor of the "secret" rate meetings of the railroads in order to avoid "ill will."

The Kansas legislator, declaring he was "not a lawyer" and therefore could not determine whether passage of H.R. 2536 would automatically dismiss the Georgia case, also enlightened the governor on shipping discriminations. He said that if a railroad discriminates against another road in respect to routings, it is a direct violation of the Interstate Commerce Act and that complaints of this nature also arise because many shippers do not list "actual shipping instructions."

"Business necessitates transportation and transportation will stop if rate-making procedures stop," he added.

Senator Hawkes also informed Mr. Arnall that "railroads have found a way to serve everyone," and that he was fearful of the outcome if the present system of rate conferences were to be abolished. "Who is more capable than the I. C. C.?" he asked the governor, who had declared that in a case involving southern cotton textiles, territorial rate associations had overridden a decision by the commission.

Calls on Truman—The governor called on President Truman on April 1 and is reported to have asked him to veto the Bulwinkle bill should it pass the Senate. In a press conference on April 3, the President did not commit himself in regard to the

bill, although he said he had discussed it with Mr. Arnall.

In addition to witnesses mentioned in *Railway Age* last week, page 691, several proponents of the measure have appeared before the committee, including J. M. Hood, president of the American Short Line Railroad Association, and J. E. Tilford, vice-president, traffic, of the Louisville & Nashville. "The conference method is in no way responsible for the so-called North-South rate dispute," Mr. Tilford declared. "The results of the controversy will make some sort of conference procedure inevitable."

"If the rate conference plan is abrogated or its procedure seriously curtailed," he added, "there will be no practicable way for the railroads to handle their rate changes, and the shipper would have no recourse except to apply to the I. C. C. whenever, because of a change in commercial conditions or for some other reason, a shipper desires a change in the rates. The railroad desiring to change its rates would be faced with the same dilemma."

Conferences Serve Public Interest—Mr. Tilford also told the committee that more than 80 per cent of the nation's railroad freight schedules and rates have joint application over two or more lines, therefore making the conference procedure essential to the railroad industry. He said that the conference plan is necessary in the public interest and that the procedure and the publication of common or agency tariffs are more efficient and economical than if the adjustment of rates were handled by each individual railroad and each railroad published its own tariffs.

In his testimony, Mr. Hood contended that "short lines would be peculiarly and disproportionately affected by any disruption of the present method of arriving at rates, schedules and other joint arrangements by reason of the fact that very little of the traffic enjoyed by short lines is local."

Among other witnesses appearing in support of the bill were representatives of trucking associations and individual firms, who also advocated continuance of the present rate-making and joint conference procedure.

Equipment Building Delayed by Strikes, Small Concedes

Although production of many basic commodities is increasing, production of consumers' durable goods—"the things that sop up inflationary buying power"—has been lagging, John D. Small, Administrator of Civilian Production, asserted last week in his latest monthly report.

The report indicated that the steel strike and other "work stoppages" had particularly affected February production adversely in such industries as railroad equipment, automobiles and machinery. However, output in other important items, such as textiles, rubber, stone, clay and glass products continued to advance, Mr. Small reported. February carloadings at 700,000 a week, coal production at two million tons a day, electric power output at four billion kilowatts a weeks and petroleum output at 4.7 million barrels a day all were about the same or better than during the preceding month.

The report predicts a sharp rise in the Federal Reserve Board's seasonally adjusted index of production for March because of the strong pick-up in steel ingot production and settlement of the big motor and electrical strikes. Whether it represents a real turning point depends, the report says, "upon the speed with which labor-management problems in soft coal industry are resolved."

With reference to the strike in the bituminous coal fields, the report states that the overall supply of coal in the area east of the Mississippi has improved, although anthracite and bituminous coal of high grade by-product coking and metallurgical quality used in the manufacture of steel and gas, and certain double-screened coals used in domestic markets, are still in critical short supply.

Referring to railroad passenger cars, the report points out that the modernization program and the completion of military troop sleepers await strike settlement with the steel workers making railroad cars. It adds that the backlog of orders by railroads for passenger coaches has increased by 451 to a total of 2,645, which will not be completed until late 1947. There also remain 390 troop sleepers to be produced to complete the program of 1,200 scheduled for 1945 delivery.

Output of freight cars for domestic use sagged in February to 2,105, compared with 3,040 in January, due to the steel strike, the report says, while production for export went down from 1,272 to 714. According to Mr. Small the backlog on freight cars remains at "about 85,000 for domestic use" and 45,000 for export. Percentage of rolling stock awaiting repairs has increased from 2.4 per cent during the war to 4.3 per cent.

Production of locomotives during February was practically at a standstill because of the steel strike, while backlogs of orders increased. Orders today for both steam and large Diesel-electric engines exceed 1,000 each, the report states.

Latimer's Successor Named

The White House announced April 3 that President Truman has nominated William J. Kennedy of Cleveland, Ohio, as chairman of the Railroad Retirement Board and "public" member thereof, succeeding Murray W. Latimer, whose resignation was reported in *Railway Age* of February 2, page 297. Mr. Latimer's five-year term would have expired August 29, 1947. It was noted that Mr. Kennedy is from the same city as Representative Crosser, who introduced the bill (H. R. 1362) now before the House interstate and foreign commerce committee which would "liberalize" existing railroad retirement and unemployment insurance legislation.

U. N. R. R. A. Rail Equipment Arrives in China

Twelve fully assembled 90-ton locomotives and tenders, the first heavy railroad equipment to arrive in China since the war's end, were unloaded at Shanghai last week, the United Nations Relief and Rehabilitation Administration reports. The locomotives were purchased by U. N. R. R. A. from surplus Army equipment.

The locomotives will be run to the Shanghai-Nanking railroad workshops at Changchow, halfway to Nanking, where they will be serviced and then made available to the Ministry of Communications of the Chinese government. Until converted to the use of coal by installation of fire grates being manufactured in the United States, the locomotives, which are the oil-burning "MacArthur" type, will be placed in operation with bunker oil.

In addition to 250 locomotives scheduled for shipment to China, 12 shiploads of rolling stock, including 3,450 flat cars, box cars and gondolas also are being dispatched by U. N. R. R. A. to that country, it was stated.

Electric Line Accounting Order

The Interstate Commerce Commission has further modified and amended its Uniform System of Accounts for Electric Railways, effective January 1, 1947. The additions, revisions and amendments have been made available in a 97-page mimeographed publication.

5-Cent Air Mail Bill

Representative Boren, Democrat, of Oklahoma, has introduced a bill (H. R. 5942) to fix the rate of postage on domestic air mail at 5 cents per ounce. Such legislation was recommended in a report by Gael Sullivan, second assistant postmaster, on the future of the air mail service, as noted in *Railway Age* of March 23, page 651. The bill was referred to the House Committee on the post office and post roads.

Wheeler's Reorganization Probe Approved by Senate

The Senate on April 1 agreed to Senate Resolution 192, introduced by Senator Wheeler, Democrat of Montana and chairman of the interstate commerce committee, for himself and Senator Reed, Republican of Kansas, the effect of which is to authorize an investigation by that committee or a subcommittee of the conditions surrounding the operation and handling of railroads undergoing reorganization by the trustees and receivers, and of the fees paid such trustees and counsel and bankers in connection with the reorganizations. The committee was authorized to subpoena witnesses and documents, and was allowed $5,000 for expenses.

More Prices Raised by O. P. A.

The Office of Price Administration has transferred from its machinery classification to its railroad specialties classification certain railroad parts and assemblies 90 per cent of the shipping weight of which is steel castings, and thereby has brought such articles under the higher price ceilings applying to railroad specialties, effective April 1, according to an O. P. A. announcement of that date.

Included in the parts and assemblies now being classified for the first time by the O.P.A. as railroad specialties are underframes, underframe parts and truck frames for locomotives, tenders and cars; locomotive wheel casters not otherwise covered by the regulations (RPS 41); ash pans; pilots; hopper door frames, locks, hinges

and drop end locks. The effect of the change is to increase the October 1, 1941, prices of these articles by 15.5 per cent, it was explained. Any previous price adjustments covering them are cancelled, however, and they are repriced on the railroad specialties basis.

In another change, the O.P.A. has authorized the addition of pattern costs to the prices of railroad specialties where it was the maker's practice to do so in October, 1941. The base date for determining prices on various specialties has been changed from July 15, 1941, to October 1 to 15, so that all articles of that class will have the same base date.

Rail and Post Office Officials To Discuss Mail Problems

Representatives of the nation's railroads and Post Office Department officials will meet at the Congress hotel in Chicago April 22-25 "to bring the Railway Mail Service up to the minute and ahead of schedule in the modern transportation world," according to Second Assistant Postmaster General Gael Sullivan.

For the first time in history, all of the 120 chief clerks of the Railway Mail Service will be assembled at the meeting. They will discuss the problems of railway mail with Mr. Sullivan, General Superintendent Hardy and the 15 division superintendents of the service.

President John J. Pelley of the Association of American Railroads and other high ranking railroad executives will attend the sessions. President C. M. Harvey and the full membership of the executive committee of the Railway Mail Association will represent the railway postal personnel.

"We are going to go as far as we can in these four days of discussion," Mr. Sullivan declared, " to plan a speedier handling and dispatch of mails by all surface means. Our discussions will embrace not only the meeting of new conditions in mail transport, but expansion of the highway post office service and better co-ordination and improvement of the star route service.

"In the very near futures, fast trains will cut by eight hours the rail time between Chicago and San Francisco. We must revise our mail schedules and operations to insure that the mails gain the full advantage from these improvements.

"Of great importance will be the discussion with representatives of railway mail personnel of procedures for better labor-management relations. We also want to develop further a system of solid carloadings of mail to destination points where such loadings will be practicable. Continuing to utilize high speed trains for preferential mails—first class and daily papers—we want also to have the maximum use of them for through solid-car mail shipments."

Mr. Sullivan said he regards the conference as an "ideal forum where all concerned—the Post Office Department management, the rail carriers and railway mail personnel—may discuss all matters relating to the surface transportation of mail."—A joint Carrier-Post Office Committee appointed by Mr. Sullivan has been conferring in Washington to draw up preliminary recommendations for submission at the conference.

It also was revealed this week that the board of directors of the A.A.R. will hold its monthly meeting at Chicago on April 23 instead of at Washington, D. C., so that members may participate in the Mail Service discussions.

Ross Commands New York Port

The War Department has announced the assignment to the New York port of embarkation, effective April 5, of Major General Frank S. Ross, who was chief of transportation in the European Theater of Operations during hostilities in that area. He succeeds Major General Clarence H. Kells, who has been in charge of the port since July, 1945, and who is retiring from the service.

The office of chief of transportation in the E. T. O. has been merged with headquarters of the United States Forces European Theater, the announcement revealed. The new section on the special staff of the theater commander will be headed by Colonel S. R. Browning, who succeeded General Ross as E. T. O. chief of transportation.

According to the War Department statement, General Ross, in his nearly four years as chief of transportation in Europe, moulded Transportation Corps troops there into a smooth and efficient functioning machine that maintained a continuous flow of men, supplies and equipment to the battlefronts." His first big assignment, it was pointed out, was the "planning and the supervision of the movement of the North African invasion force which originated in the United Kingdom."

Representation of Employees

The Brotherhood of Railroad Trainmen has been authorized to continue to represent road conductors employed by the New York, New Haven & Hartford, as a result of a recent election which has been certified by the National Mediation Board. The B. of R. T. was challenged by the Order of Railway Conductors, which was defeated, 307-185.

Maintenance of way employees of the Monongahela Connecting are now represented by the Brotherhood of Maintenance of Way Employees as the result of an election which the United Steel Workers of America, C. I. O., lost, 52-44. These employees formerly were represented by the C. I. O. union.

In a decision involving train dispatchers on the Southern Pacific, Pacific Lines, the board ruled that any question as to whether certain chief dispatchers are officials of the carrier as defined in Interstate Commerce Commission must be determined by the Commission and not by the board.

The board's services had been invoked by the American Train Dispatcher's Association to determine whether that organization may, in addition to those train dispatchers which are already represented by it, also represent the chief train dispatchers. At the time the application was received, assistant chief, trick, relief, and extra train dispatchers, in addition to certain chief train dispatchers, were represented by the union involved.

During the investigation, the S. P. protested against the inclusion of certain chief dispatchers on the eligible list, claiming that the occupants of these positions are "officials." The board ruled that in the absence of any specific determination by the I. C. C. that the particular chief dispatchers in question are officials of the S. P., it must include them as a part of the generally recognized class of chief, assistant chief, trick, relief and extra train dispatchers.

An election resulted in the designation of the A. T. D. A. to represent the entire craft of train dispatchers on this line.

Following another recent election, the Brotherhood of Railroad Trainmen has been authorized to represent conductors, brakemen, motormen, trolleymen and bus operators employed by the Utah-Idaho Central, replacing the Employees' Committee of the Utah-Idaho Central.

The services of the board also were invoked to determine the representation of chief, night chief, assistant chief, trick, relief and extra dispatchers employed by the Pittsburgh & Lake Erie, but the application of the American Train Dispatchers Association, which had requested intervention by the board, was withdrawn during the course of the investigation.

The National Council, Railway Patrolmen's Unions, A. F. of L., has been authorized to represent patrolmen, head watchmen, assistant head watchmen, money guards, watchmen, guards, train riders and special agents employed by the Union Pacific. These employees formerly were without representation.

In other recent elections, the Brotherhood of Railway Clerks has been authorized to represent clerical, office, station and storehouse employees of the Macon, Dublin & Savannah, and the Brotherhood of Railroad Trainmen has been authorized to represent stationmasters employed by the Nashville Terminals.

The services of the board also were invoked by the Order of Railway Conductors to determine the representation of road conductors employed by the Denver & Rio Grande Western, but the union's application was withdrawn during the course of the board's investigation.

Wide Use of Aluminum in Cars by Railroads Predicted

An increased use of aluminum, particularly by railroads and other transportation equipment industries, is predicted in an article appearing in the April issue of Domestic Commerce, monthly publication of the U. S. Department of Commerce. The article points out that aluminum now has approximately 3,500 uses as compared with 1,500 before the war and that its adaptability for many products and industries is indicative of its increasingly wide use.

"The current trend toward light weight and high speed in commercial surface transport places aluminum in a very favorable position," the article states, adding that "one pound of aluminum has the volume of about three pounds of steel, although in the finished product the ratio may be more nearly equal one to two, especially in parts bearing structural loads."

The article continues:

"The aluminum industry expects the nation's railroads to absorb large quantities of aluminum in the near future. The com-

mercial use of the metal in this type of equipment began in 1923, when 25 urban cars with aluminum applications were built by the Illinois Central. This railway, as well as few others, supplemented their rolling stock with some aluminum equipment. In 1933, the first aluminum passenger coach and Pullman car were put on the rails and in 1934, the first all-aluminum train was put into operation by the Union Pacific. The all-aluminum train is carried on a steel chassis.

"About the same time, the aluminum hopper car was given its experimental test by the Burlington Railway. As aluminum is not affected by sulfurous materials, the aluminum hopper car is ideally suited for the transport of both soft coal and sulfur. One aluminum-ore producer uses such cars in transporting bauxite. By the end of 1941, there was a noticeable trend toward the use of the lighter rolling equipment, although the number of aluminum units was small compared with the total in use.

"The war temporarily suspended activity along this line, but interest in the lighter equipment is being renewed, as evidenced by recent developments. At the close of 1945, orders were booked by six of the nation's railroads for a total of 233 cars with all-aluminum superstructures, while 76 locomotives, each averaging about five tons of aluminum, are on order by two eastern railroads. The car orders include dormitory, standard and deluxe coaches; tavern lounge, grill, snack bar and diners; parlor observation, Pullman and baggage and mail cars. Ten double-decker, all-aluminum suburban coaches are on order for the Long Island.

"The first experimental box car with all-aluminum exterior began to roll on the Great Northern last November and the use of 3,722 pounds of aluminum in this 43,500-pound car effects a saving of 4,057 pounds in its total weight. The value of the aluminum tank car for the transportation of petroleum products and certain chemicals is well known and skips with extensive aluminum application are used by some mining companies to transport tonnages on their own properties."

Mare Island Line Not a Plant Facility, Examiners Say

The Interstate Commerce Commission should find, according to a proposed report on further hearing by examiners T. Leo Haden and A. J. Banks in the No. 29015 proceeding, that through rates to and from Mare Island, Calif., by the San Francisco & Napa Valley (which connects at Napa Junction with the Southern Pacific) are unreasonable to the extent that they exceed the present corresponding rates from or to Vallejo, and that the Napa Valley should be accorded divisions of such rates.

In a prior report by the commission, summarized in *Railway Age* of December 30, 1944, page 1010, through rates to and from Mare Island were found not unreasonable or unduly prejudicial in so far as they included the Napa Valley's local rate, which made them exceed the Vallejo rates. The commission there denied a petition of the Napa Valley, made at the instigation of the Navy Department, for the establishment of joint rates and divisions and dismissed the complaint without prejudice to the filing of a petition for consideration of the lawfulness of that road's local rate or arbitrary of 5 cents, per 100 lb., over the so-called terminal rate basis, for its services between Napa Junction and Mare Island. However, upon petition of the Napa Valley, supported by the Navy, the proceeding was reopened for further hearing.

The S. P. contended that the complainant is a private switching road and not a common carrier performing line-haul service, but the examiners recommended that the commission should find that since August 29, 1935, its operations, including the handling of both commercial and Navy traffic and the use of government rails under trackage rights, have been those of an interstate line-haul common carrier.

As was stated in the previous I. C. C. report involving the two roads, the S. P.'s objection to establishing terminal rates to Mare Island was that land-grant deductions or equalizations averaging 40 per cent applied to most of this traffic. The statute requiring carriers to make land-grant deductions has been repealed by Congress, effective October 1, 1946. The examiners pointed out that most of the traffic over the routes concerned moves over equalized rather than land-grant routes and with the repeal of the statute, there should be no necessity for the equalization agreements.

They then recommended that the Southern Pacific should join the S. F. & N. V. in establishing joint rates to and from Mare Island to points within the United States and should accord it reasonable divisions of such rates.

Committee Would Bail Out Equities

(*Continued from page 739*)

not have been. It is for Congress to declare that it shall not occur again."

The report went on to show that the Missouri Pacific; New York, New Haven & Hartford; St. Louis-San Francisco; Chicago, Rock Island & Pacific; Chicago, Milwaukee, St. Paul & Pacific, and St. Louis Southwestern are among the roads that would meet the "solvency" test of the Reed bill in that their average earnings over a 7-year period exceeded their fixed charges. Yet, it concluded, "unless Congress promptly enacts some legislation such as the Reed bill that will prevent pending plans of reorganization from being consummated, the stockholders of all these roads will be wiped out completely and the claims of junior security holders drastically impaired."

Expect Air Freight Threat to Bring Better Rail Service

The potential usefulness of the airplane for the transportation of agricultural commodities cannot be measured solely in terms of tonnage carried, according to a study of the subject by Department of Agriculture staff members forming the "working group on conversion of marketing facilities and methods of the interbureau committee on post-war programs."

"Many agricultural commodities now being transported by surface carriers will be hauled by the airplane unless the surface carriers improve the techniques and equipment they are now using," it predicts. "New improvements in equipment and better handling methods by the surface carriers probably will be adopted at an accelerated rate if the airlines threaten to capture a substantial part of their tonnage. As a pace setter for the transportation industry the airplane may benefit producers and consumers more indirectly than directly."

The group concluded that, "although several test shipments of agricultural products have been made, they serve only as guideposts and indications of what may be expected when larger quantities of produce may be shipped by air. . . . Air-borne produce must be handled by shippers, wholesalers, and retailers by methods substantially different from those used in marketing rail-borne produce. A new field with new requirements has been opened to the package industry. Pilots and airline operators must learn a new business. . . . Quality superiority of air-borne produce over surface-borne produce must be proved, and then the public must be educated to the facts."

In general, the group pointed out, the quantity of agricultural products that will move by air depends upon five factors: The absolute cost of air transportation and the relative cost compared to other forms of transportation; the extent to which other marketing costs can be reduced; the extent to which demand will be increased by air transportation; the quantity of industrial products that will move in return loads; and the available ground facilities for handling planes and cargo. The report summarized the results of several studies of potential air cargo of fruits and vegetables and miscellaneous perishables, based on assumed rates in general ranging between 3 and 15 cents per ton-mile. It was pointed out, incidentally, that rail and air ton-mile costs are not strictly comparable in the many cases where the air distance between terminals is substantially less than the rail distance.

Potential cargo for air transportation from sections growing winter vegetables and fruits to the northeastern industrial area was estimated at 5 billion net ton-miles. Various studies were quoted as estimating that "if air-cargo rates of less than 10 cents per ton-mile should be offered, a substantial portion of the 5 billion ton-miles" would move by air. As to the return load, a study made at Detroit was quoted to the effect that 200 out of 436 manufacturers answering a questionnaire would use air freight from that point to the Pacific coast for a total movement of 175 tons a month if the rate was 10 cents a pound, airport to airport.

But developing further the point that air competition would force other types of transportation to provide better service for perishables, the report conceded that "until air-cargo rates are reduced to nearly the same level as rail and truck rates, air cargo will be limited to a relatively small tonnage of commodities which possess special characteristics. Unless substantial value is added to the product by the airplane's speed, the product will be hauled by the cheaper surface carrier. . . .

"Many minor and some major commodi-

ties now being transported by surface carriers might be better carried by the airplane under present conditions, but if the railroads and motor carriers improve their equipment and handling methods the tendency for some of this traffic to leave the surface carriers would be retarded. Technological improvements made during the war and the quantity of worn-out and obsolete equipment in the hands of the railroads and truck lines at the close of the war probably would cause the railroad and truck line officials, in any event, to add much new and improved equipment to their lines. Surface carriers will be inclined to rush improvements and make more far-reaching changes if they believe a substantial quantity of their traffic volume is threatened by the airplane. . . .

"The railroads may put into service a greater number of lightweight improved refrigerator cars which are equipped with circulation fans, half-stage icing grates, collapsible bunkers, load dividers, distant reading thermometers, and better insulation. The wider adoption of an improved coupling will contribute toward more gentle handling. The use of Diesel-operated locomotives and the more efficient handling of perishable freight in the terminal and switching yards will help to reduce the time in transit of rail-borne freight. . . . Insofar as improvements are adopted by surface carriers, their costs of transportation will be reduced or the quality of the produce hauled will be better preserved than it now is. Either of these factors will tend to decrease the desirability of air carriers in relation to surface carriers."

A. C. L. to Spend $10 Million on Signal Modernization

Making a supplemental reply to an order served on the Atlantic Coast Line by the Interstate Commerce Commission, requiring that road to show cause why it should not be required to install an "adequate block signal system" on 2,084 miles of line, the railroad has advised the commission that it has plans to modernize the signaling on its entire line from Richmond, Va., to Orlando, Fla., and to extend that modern signalling installation from Orlando to Tampa, such plans to be executed over a 5-year period. In addition, it has under study the installation of a block signal system from Jesup, Ga., to Montgomery, Ala., as a part of this modernization program. The project would cost about $10,000,000.

As noted in *Railway Age* of April 7, 1945, page 635, the road filed an objection to the show cause order last year, contending that it was too broad and that it was not based on a showing of necessity in the public interest.

Interstate Freight Owners Set up Voting Trust

A trust agreement has been filed with the Interstate Commerce Commission providing for the disposition to the United States Trust Company of New York, as trustee for a 5-year period, of the stock in Interstate Motor Freight System held by United States Freight Company and Hickok Oil Corporation. As noted in *Railway Age* of June 24, 1944, page 1221, the commission had ordered the two companies to divest themselves of control of Interstate, in the No. MC-F-2181 and related proceedings, and since then had refused to accept various proposed alternative arrangements as compliance with the order.

The owners have advised the commission that their efforts to effect a sale of the stock through regular channels have been unsuccessful, but that they will continue to seek a purchaser while the stock is held in trust, with the trustee being under instructions to dispose of it in the event they do not.

Car Service Orders

On recommendation of the Office of Defense Transportation, the Interstate Commerce Commission has issued Service Order No. 480, effective from March 28 through April 15, unless otherwise directed, permitting cars loaded with unbilled coal to be held free of demurrage on mine or scale tracks. It was intended to facilitate compliance by the mines with an order of the Solid Fuels Administrator directing them before the miners' strike began to hold unbilled not less than one day's production of coal, subject to his instructions.

The Car Service Division of the Association of American Railroads suspended its 25 per cent no-bill rule to permit maximum production of bituminous coal up to the time the strike began, allowing mines to comply with the S. F. A. order. The fuels administrator also has set up rigid limitations on the delivery of soft coal to consumers by retail dealers and dock operators, giving priority to public utilities, hospitals and domestic users.

Penalty demurrage charges on box and refrigerator cars have been modified by the commission at the request of the O. D. T. By Amendment No. 3 to Fourth Revised Service Order No. 180, effective April 3, demurrage after expiration of free time on refrigerator cars held for loading, unloading, reconsignment, diversion, inspection or orders has been fixed at $2.20 per day for the first two days, $5.50 per day for the third and fourth days, and $11.00 per day thereafter, instead of $11.00 for the first day, $22.00 for the second day and $44.00 per day thereafter. This modification was the result of a somewhat improved refrigerator car supply situation, according to the O. D. T.

Penalty demurrage charges on box cars held beyond tariff free time, running up to $16.50 per day, have been suspended from April 3 to September 15 by Service Order No. 369-A, allowing normal tariff demurrage provisions to apply for that period.

Another result of the improved refrigerator car situation was the vacation by Service Order No. 474-A, effective April 3, of the commission's order providing that orders for cars placed by shippers of seed potatoes in Maine should have priority. Although the priority was effective only 4 days, the O. D. T. announced that its cancellation was justified because there was an adequate supply, in fact a 9-day bank, of refrigerator cars in Maine.

Refrigeration of potatoes has been restricted, however, by Service Order No. 479, effective April 5 through September 15, unless otherwise directed. It prohibits initial icing or reicing, east of the Mississippi river, of potatoes originating in Alabama, Georgia, Florida, South Carolina, North Carolina, Virginia, West Virginia, Maryland, Pennsylvania, Delaware, New Jersey and Long Island (New York). However, General Permit No. 1 under the order, effective April 5 through June 30, authorized initial icing only on potatoes originating in certain counties in Florida.

On an O. D. T. recommendation, based on the conclusion that the demand in the West for box cars for grain loading does not justify priority orders, the commission has suspended two orders designed to augment the box car supply available for the shipment of grain to meet the requirements of the government program for relief shipments overseas. Second Revised Service Order No. 450, which prohibited supplying box cars for grain loading in the Pacific northwest except when consigned to certain Pacific coast ports, has been suspended by Amendment No. 2, effective March 30 through June 5. Service Order No. 458, which gave priority in furnishing cars for loading grain from country elevators to terminal markets in the territory, generally speaking, west of Pittsburgh, Pa., and the Ohio and Mississippi rivers, has been suspended likewise, by No. 458-A, from March 30 through June 5. The expiration date of both original orders was June 5, so that they will expire automatically on that date, in the absence of other action by the commission.

Suspension of these orders was possible, the O. D. T. said, because of a sharp decrease in loadings of grain and products, the national total for the week ended March 23 being 43,457 cars, a decrease of 4,897 cars from the preceding week and of 3,378 cars from the corresponding 1945 week.

By Revised Service Order No. 462-A, effective April 3 through July 21, the commission has suspended its order restricting the use of box cars for the movement of carbon black intended for export.

To Install Interlocking Where I. C. C. Recommended It

Replying to an order to show cause why an interlocking should not be installed at Danville Junction, Ill., served on them by the Interstate Commerce Commission, the three roads concerned, the Peoria & Eastern (New York Central System), Wabash and Chicago & Eastern Illinois, have advised the commission that such an installation will be made, with the road last named executing the task. As noted in *Railway Age* of February 2, page 297, the order was issued after an investigation of a train accident at that point.

Burlington Sells Bus Affiliate Control in Complex Deal

Sale of a controlling interest in the motor bus affiliate of the Chicago, Burlington & Quincy to the All American Bus Line has been approved by Division 4 of the Interstate Commerce Commission in the No. MC-F-2937 and related proceedings. The transactions include formation of a new company, the Burlington Truck Lines, controlled by the Burlington through ownership of its stock, to acquire the truck operations of the Burlington Transportation Company, after which control of the latter

will go to All American through its acquisition of 51 per cent of the outstanding stock. The railroad will retain 49 per cent of Transportation's stock and will name two-fifths of its board of directors.

The bus lines operated by Transportation extend from Chicago via Omaha, Neb., and Salt Lake City, Utah, to Los Angeles and San Francisco, from Omaha to Denver, Colo., from Denver to Billings, Mont., as well as various subsidiary routes in Missouri, Iowa, Illinois, Nebraska, Colorado, Wyoming and South Dakota. In addition, it owns 50 per cent of the stock of Denver, Colorado Springs, Pueblo Motor Way, operating buses from Denver to Trinidad, Colo., and through that affiliate and directly 50 per cent of the stock of Denver-Salt Lake-Pacific Stages, operating buses between Denver and Salt Lake City. Stock of these affiliates remain in control of Transportation, thus coming under the control of All American.

The truck lines operated by Transportation, which are to be acquired by Burlington Truck Lines and remain wholly owned by the railroad, in general parallel lines of the Burlington in Illinois, Iowa and Nebraska, and extend from Chicago to Denver and Denver to Billings. All American operates bus lines from New York via Pittsburgh, Pa., Chicago and St. Louis to Los Angeles and San Francisco, reaching California through Texas and Arizona, and thus not following the routes over which Transportation operates. Another phase of the transaction, approved at the same time, is the acquisition by All American of Eastern Trails, a bus line operating from New York to Baltimore, Md., and nearby points, but operating rights between Baltimore and Philadelphia then belonging to All American will be purchased by Safeway Trails, another bus operator not otherwise concerned in the proceedings.

All of the bus lines involved except All American are members of the so-called National Trailways system which provides through service generally in competition with lines in the Greyhound system. The president of All American is I. B. James, formerly president of Burlington Transportation Company in direct charge of its bus operations. The principal stockholders of All American are the General American Aero Coach Company, the Phillips Petroleum Company, and the Munson Line, Inc. The purpose of the transfer of the bus operations is said to be to strengthen All American as a competitor for transcontinental travel, eliminate duplicate facilities, obtain better coordination of schedules, and bring about standardization of equipment and techniques.

To finance the transactions, Burlington Truck Lines has agreed to issue to the railroad $500,000 par value of stock and All American has agreed to pay the railroad $1,500,000 for the 51 per cent interest in Burlington Transportation which it is acquiring, Transportation's indebtedness to the railroad being reduced at the same time by issuing to the railroad $416,600 of capital stock and transferring certain real estate. All American has been authorized to issue a $1,500,000 promissory note to the Bankers Trust Company of New York as the basis for a loan of that amount, the proceeds of which it will pay to the Burlington. Purchase of Eastern Trails will be accomplished by payment of $117,600 from All American's current funds, $20,000 of which already has been paid, while Safeway will pay All American $35,000 for the rights it is to acquire.

The division's approval of the transactions was given subject to certain conditions with respect to bookkeeping and amortization of intangible property accounts. Arrangements have been worked out, it was indicated, for the protection of any employees adversely affected.

Materials and Prices

The following is a digest of orders, notices and information that have been issued by the Office of Price Administration and the Civilian Production Authority since March 12 and which are of interest to railways:

Priorities—The O. P. A. has issued an amended priorities regulation No. 28, rearranging and clarifying the priorities regulation under which bottleneck breaking CC ratings are issued, and incorporating into it and a new schedule No. 1 some policies which previously had been outlined in directives to the regulation or enforced in routine administrative procedure.

Tin and Lead—In a move to assure prompt productive use of the tin and lead contained in certain scrap material and solder sold by the War Assets Corporation, C. P. A. has restricted W. A. C. sales of solder, antimonial lead die metal and battery lead scrap, by direction No. 15 to priorities regulation No. 13.

Prices

Builders' Hardware — A reconversion ceiling price increase of 10 per cent above prices charged on Oct. 1, 1941, has been granted by O. P. A. to manufacturers of builders' hardware and related items. In a companion order, O. P. A. gave wholesalers and retailers a new method of computing the ceiling prices, which will reflect absorption of increases given producers. Amendment No. 12 to order No. 48 under section No. 22 of regulation 591; amendment No. 7 to revised schedule No. 40; amendment No. 5 to regulation No. 413, supplementary order No. 151, all are effective immediately.

Car Wheels—To compensate for higher steel costs, O. P. A. has announced an increase to $23.80 each from $21.80 in the ceiling price for Class 33-C one-wear wrought steel freight car wheels, and to $25.80 from $23.60 for Class 33-D wheels, both prices f.o.b. Pittsburgh or Chicago before treatment and extras; an increase to $3.85 per 100 lb. from $3.50 per 100 lb. in the ceiling prices for forged steel railway axles, f.o.b. Pittsburgh, Chicago or Birmingham, before treatment, machine operations, switching charges or extras.

Concrete — Manufacturers of ready-mixed concrete sold in nine southern states may add to their ceiling prices the dollar-and-cent amount of the increase caused by the recent 10-cent-a-barrel increase in Portland cement ceilings, O. P. A. ruled, as to Georgia, Alabama, Tennessee, Louisiana, Mississippi, North Carolina, South Carolina, Florida and part of Virginia. Amendment No. 34 to order No. 1 under section No. 25 of regulation No. 592 is effective March 27.

Crossties—O. P. A. authorized a 5-cent increase in the ceiling prices of five grades of crossties produced in lake states of O. P. A. Zone No. 8. Amendment No. 4 to third revised regulation No. 216 is effective March 27.

Dining Cars—Restaurants and railroad dining cars may serve smaller than their customary portions of wheat and oil products without reducing their prices, O. P. A. has ruled in amendment No. 11 to restaurant regulation No. 2 and amendment No. 5 to restaurant regulation No. 1 both effective immediately.

Forgings — Manufacturers of ferrous forgings have been given an interim increase of 16.25 per cent over their 1941 prices to cover recent increases in materials prices and approved wage advances. O. P. A. amendment No. 8 to regulation No. 351 is effective immediately.

Fuel Oils—Ceiling prices for residual oils have been increased by O. P. A. at all levels of distribution and other price relief is granted in Amendment No. 42 to regulation No. 88, Amendment No. 20 to revised regulation No. 137, and Amendment No. 12 to regulation No. 323, all effective March 28.

Hardwood Flooring—O. P. A. increased mill ceiling prices for maple, birch and beech flooring by an average of 9 per cent in amendment No. 8 to regulation No. 432, effective at once.

Iron Radiation—An increase of 7 cents a sq. ft. equivalent, after customary discounts to distributors, to a net price increase of 6.65 cents a sq. ft. has been authorized by O. P. A. for manufacturers of cast iron radiation in amendment No. 7 to regulation No. 272, effective at once.

Jacks—Current manufacturers' ceiling prices for heavy duty mechanical jacks have been increased 15.8 per cent, by order No. 593 under revised regulation No. 136, effective immediately.

Machinery—An increase of four per cent in ceiling prices for all machinery, parts and industrial equipment, where the percentage of steel costs in selling prices is over 40 per cent, has been announced by the O. P. A.

The increase is being made at all levels of sale, effective March 25, and is being authorized to compensate producers for higher steel costs resulting from the average steel price advances of $5 per ton authorized as of February 15, 1946. Increases in costs of alloy steels, which go into the finished steels used in machinery and parts, averaged four per cent of price of the products.

O. P. A. said that producers of machines, parts and industrial equipment where the cost of steel was over 40 per cent of the selling price were not in a position to absorb this increase along with wage increases many producers have recently put into effect. O. P. A. said the percentage of cost of steel to price of product was fixed at 40 per cent because among such products the cost effects of the steel price increase "are most likely to create financial hardship."

Plumbing Fixtures—Maximum prices on some 40 cast iron plumbing drainage staples, essential in plumbing work on new buildings, have been raised an average of 11 per cent by O. P. A. in amendment No. 6 to order No. 1 under section No. 22 of regulation No. 591, effective at once.

Ponderosa Pine—In an action designed to stimulate production of ponderosa pine cut stock, used largely for doors, window frames and sashes, O. P. A. has authorized an average over-all increase of 6 per cent in ceilings for mill sales of cut stock. O. P. A. also tentatively increased ceilings for "workings" or extras—such as special milling, hole boring, dadoing, mitering, sanding, surfacing, and glueing—from 24 to 100 per cent. Order 3 under revised regulation 94, effective March 26.

Reconversion Pricing—O. P. A.'s reconversion pricing order has been amended to permit application for further adjustments if the price originally granted under the order appears unsatisfactory after three months' operation at 90 per cent of the manufacturer's 1941 rate of production. Amendment No. 4 to revised supplementary order No. 119 is effective March 25.

Softwood Plywood—To stimulate production of certain thicknesses and grades of softwood plywood needed in the veterans' emergency housing program, O. P. A. has granted price increases averaging 20 per cent in amendment No. 2 to the third revised regulation No. 13, effective now.

Softwood Shingles—An increase of 30 cents a square in ceilings for mill sales of western softwood shingles in all standard grades has been authorized by O. P. A. in amendment 4 to revised regulation No. 164, effective March 20.

Southern Pine—The recent increase in mill ceilings on southern pine lumber, has been passed on by O. P. A. at distribution levels in amendment No. 18 to second revised regulation No. 215 effective March 14.

Steam Generators—Manufacturers of steam generating equipment have been given an interim O. P. A. price increase of 12 per cent to cover increased costs since 1941, including the recent increase in steel prices. Order 589 under revised regulation No. 136 is effective March 21.

Surplus—Ceiling prices already established for sales of surplus property by the W. A. C. and resellers will also apply to sales of the same items by W. A. C. and resellers, O. P. A. has directed in amendment 2 to revised supplementary order No. 109 and supplementary order No. 122, both effective March 25.

Truck Parts—Price control on parts for trucks and other commercial vehicles when sold for use as original equipment in the manufacture of motor vehicles has been suspended by O. P. A. in amendment No. 10 to supplementary order No. 129, effective immediately.

Wire Cutters—A retail ceiling price of $3.50 has been established by O. P. A. for new wire cutters declared surplus by the army engineer corps, in order No. 109 under supplementary order No. 94, effective at once.

Equipment and Supplies

FREIGHT CARS

The WABASH has ordered 60 70-ton covered hopper cars from the American Car & Foundry Co.

The CHESAPEAKE & OHIO has ordered 50 30-ton steel caboose cars from the American Car & Foundry Co.

PASSENGER CARS

The KANSAS CITY SOUTHERN has ordered two additional 85-ft. aluminum dining cars from the American Car & Foundry Co. The railroad now has 10 passenger cars on order with American Car & Foundry.

The CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC has ordered 6 mail cars, 6 combination baggage-dormitory cars, 24 coaches, 6 dining cars, and 6 recreation-lounge cars from the company shops at Milwaukee, Wis. This road has also ordered from the Pullman-Standard Car Manufacturing Company 18 sleeping cars and 6 compartment-drawing room "Beaver Tail" observation sleeping cars. All of the above cars, which will be of lightweight alloy-steel construction and equipped with four-wheel trucks and special "tight" couplers, will be used to equip 6 new lightweight 12-car streamlined trains for operation between Chicago and Tacoma, Wash., and Seattle.

Construction

CHICAGO, ROCK ISLAND & PACIFIC.—Division 4 of the Interstate Commerce Commission has approved this road's proposal to construct a new line from Brighton, Iowa, to Ainsworth, 17.3 miles, in lieu of its existing line in order to obtain easier grades and less curvature. The new construction will consist of single track, laid with 131-lb. rail, and the net cost is estimated as $2,928,912. Completion by April 30, 1947, is contemplated. Ruling grade will be reduced from 1.25 per cent to 0.5 per cent; maximum curvature from 4 deg. to 1 deg. 30 min.; total central angle of curvature from 834 deg. to 147 deg.; and distance by 3.6 miles.

NORTHERN PACIFIC — Foley Brothers, Inc., St. Paul, Minn., in partnership with the Marsch-Peterson Company, Omaha, Neb., have been awarded the grading contracts for the eastern half of the Northern Pacific's line relocation between New Salem, N. D., and Kurtz. A. Guthrie & Co., St. Paul, has been awarded the contract for the western half of this grading, and has sublet a portion of the culvert work to the Rue Construction Company, Bismarck, N. D.

The new line, which will be 16.5 mi. in length, will reduce the distance between New Salem and Kurtz 9.3 mi. and will have a maximum grade of 0.45 per cent, compared with 1.0 per cent on the existing line. The work will involve the handling of approximately 4 million cu. yd. of material in grading and the construction of four large bridges over waterways and a highway grade separation. Work on the project, which it is estimated will cost $2.5 million, began on April 1.

NORFOLK & WESTERN.—This company has applied to the Interstate Commerce Commission for authority to construct a new line from Peebles, Ohio, to a point near Mineral Springs, 7.9 miles, to obtain better grades and less curvature than on the existing line it is to replace.

PENNSYLVANIA-READING SEASHORE LINES.—This road has applied to the Interstate Commerce Commission for authority to build a 3.25-mile extension from its line near Pomona, N. J., to the premises of the Atlantic City Racing Association.

Supply Trade

The **James G. Biddle Company** has announced the consolidation of its offices and factory in a new location at 1316 Arch Street, Philadelphia, Pa.

R. A. LeBeau, recently released from the armed forces, has returned to the **Chicago Railway Equipment Co.,** as district representative at Chicago.

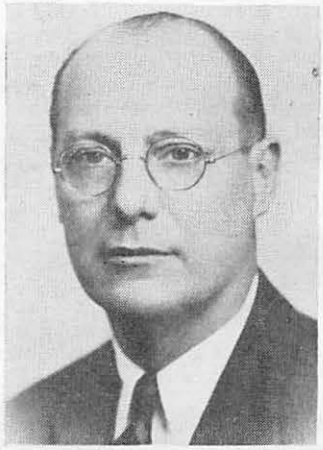
Dwight Adams has been appointed head of the Philadelphia, Pa., office of the **Pittsburgh Steel Foundry Corporation** of Glassport, Pa. He formerly was with the Heppenstall Company of Pittsburgh, Pa.

C. W. Gentry, traffic clerk, has been appointed assistant manager of railway sales for the **Continental Oil Company,** with headquarters at Chicago. He succeeds **E. F. Shannon,** who recently was promoted from assistant manager to manager of Continental's railway sales division.

William E. Thomas has been appointed division sales manager in charge of valve sales in the southeastern states territory, with headquarters in Atlanta, Ga., for the **Homestead Valve Manufacturing Company** of Coraopolis, Pa. Mr. Thomas formerly was southeastern division manager of the Chicago Metal Hose Company.

The **International Nickel Company** has announced the opening in Rochester, N. Y., of the Empire State technical section of its development and research division. **Gilbert L. Cox,** metallurgical and chemical engineer, who has been associated with International Nickel since 1931, has been appointed in charge of the new section.

E. C. Bullard, vice-president and general manager, has been elected president of the **Bullard Company** to succeed **E. P. Bullard,** who becomes chairman of the board. **George L. Todd,** comptroller, has



E. C. Bullard

been elected to a vice-presidency and **E. P. Bullard, III,** vice-president in charge of manufacturing, has been appointed assistant general manager.

E. C. Bullard is a member of the third generation of the Bullard family and the third to become president of the machine tool plant founded by his grandfather in 1880. He was graduated from the Sheffield Scientific School of Yale University and served his apprenticeship in the company's shop. Following service in the ordnance department of the Army in the first world war, he returned to work in the foundry, the machine shop, the erecting division and other departments of the Bullard Company until 1930, when he was ap-

E. P. Bullard

pointed production manager and elected to the board. He was elected vice-president and general manager in April, 1931.

E. P. Bullard began his apprenticeship under his father in 1892. He was appointed general manager of the plant early in 1902 and elected president in 1907, following the death of his father. He was awarded the Howard N. Potts gold medal by the

News Department continued on next left-hand page

These Lima-Built 2-8-4's of the Pere Marquette are constructed to provide the capacity necessary to speed heavy freights on the fast schedules that modern industry requires.

To meet today's demands for prompt deliveries, the Pere Marquette now operates a fleet of twenty-seven of these powerful steam locomotives.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

Franklin Institute of Pennsylvania in 1920 for his development of the Bullard mult-au-matic and was presented the American Society of Mechanical Engineers medal for his outstanding leadership in the development of station type machine tools in 1927. He served as president of the National Machine Tool Builders Association and has pioneered in establishing the trade school system in Connecticut. The trade school in Bridgeport, Conn., for which he raised the original funds and equipment, was renamed in his honor in 1944.

Richard W. Meacham has been appointed the Yale sales representative for the Alabama, Louisiana and Mississippi territory of the Stamford division of the **Yale & Towne Manufacturing Co.** to succeed **V. Waldron,** who has been transferred to the New England territory. Mr. Meacham has been serving in the Navy for the past 2½ years.

Don Campbell has been appointed to the public relations staff of the **American Locomotive Company.** In addition to other public relations functions, he will be editor of ALCO NEWS, a monthly publication for employees of the company. Mr. Campbell recently was placed on inactive status after serving as a senior lieutenant in the Pacific with the United States Navy. Prior to joining the Navy, he was copy desk chief of the Miami (Fla.) Herald.

Oscar W. Nelson has been appointed vice-president and general manager of the Peoria, Ill., plant of **R. G. LeTourneau, Inc.** He formerly was general manager of the Beaver, Pa., plant of the propeller division of the Curtiss Wright Corporation. He will be in charge of all Peoria operations, including those formerly handled by **Denn M. Burgess,** who recently resigned as executive vice-president and director.

Fairbanks, Morse & Co., Chicago, have consolidated their Diesel locomotive and railroad divisions. **John W. Barriger,** who has been manager of the Diesel locomotive division, has been appointed manager of the combined railroad division and **John S. King,** acting manager of the railroad division, has been appointed assistant manager. **V. H. Peterson,** formerly assistant to the president and manager of the New York office of the Baldwin Locomotive Works, has been appointed manager of railroad sales, eastern division of the company, with offices in New York.

The Caterpillar Tractor Company of Peoria, Ill., has announced an expansion program which will add approximately 41 acres of floor space to the plant, and is expected to be completed for the summer of 1948. The expansion includes a new factory for the manufacture of Diesel engines; an addition of 400,000 square feet of floor area to the present tractor manufacturing facilities; an addition of 150,000 square feet to the parts department building; two buildings for additional heat-treating facilities, a new metallurgical laboratory, and storage space for jigs and fixtures; and a centrally located building to house activities related to the maintenance of the entire plant, and to provide adequate quarters for the sales, advertising, and service departments, including an auditorium with a seating capacity of 1,200.

Pullman, Inc., has announced the election of three new directors: **Harold R. Austin,** president of the M. W. Kellogg Company, Jersey City, N. J., a Pullman subsidiary; **Forney Johnston,** senior partner of the firm of Cabaniss & Johnston, attorneys, Birmingham, Ala.; and **Gen. Frank R. Denton,** president of Mellon Securities Corporation, Pittsburgh, Pa. These members fill vacancies caused by the resignation of four members who have retired, pursuant to provisions of the U. S. District Court decree which prohibits any common directors or officers between Pullman, Inc., and any railroads of the buying group proposing to acquire The Pullman Company, the sleeping car subsidiary. The retiring directors are **Richard K. Mellon, Henry S. Sturgis, Harold S. Vanderbilt,** and **George Whitney.**

Archie J. Kashubeck has been appointed district railway sales manager with headquarters in San Francisco, Calif., for the **National Malleable & Steel Castings Co.** Mr. Kashubeck, who was assigned to San Francisco as sales agent in January, 1945, began his career with National Malleable in the engineering department in Cleveland, Ohio, in 1916. Since 1929 he has been engaged in the development and sales of railway products.

A. J. Kashubeck

General Brehon B. Somervell, commander of the Army Service Forces during World War II, has been elected president of the **Koppers Company. J. P. Williams,** who has served as chairman of the board and president since October, 1944, will continue to serve as chairman and chief executive officer. General Somervell was graduated from West Point and joined the Engineers Corps. In Paris on graduation leave at the time of the outbreak of the first world war, he was appointed assistant military attache for the State Department. After his return in 1915, he was assigned to the Mexican border for map-making. He followed General Pershing into Mexico and was engaged in building roads in the wake of the expedition. During his next assignment, as assistant to the district engineer in Pittsburgh, Pa., he organized the 5th Reserve Engineers, with which outfit he went to France. After being commissioned a temporary major in 1917, he built munitions depots abroad and helped construct railroads and advance depots. At the time of the armistice, he was the 89th division's assistant chief of staff with the rank of lieutenant colonel and he remained with the army of occupation at Coblenz, Germany, until 1920. He was engaged in a series of army activities from 1920 to 1925 and then assigned to assist in a League of Nations survey of navigation on the Rhine and Danube rivers. He was graduated from the Army War College in 1926 and served five years in Washington in charge of the river and harbor district and two years in Memphis, Tenn., as district engineer. His next task was the performance of the field work and preparation of a report on an economic study of Turkey for Kemal Ataturk, on which the Turkish leader proposed to base a five-year industrialization program. During 1935 and 1936 he headed projects operations for the National Emergency Council; rebuilt Gainesville, Ga., which had been destroyed by a hurricane; and was promoted to a lieutenant colonelcy. After serving as engineer in charge of the Florida Ship Canal construction he was appointed head of New York's Works Progress Administration. He was promoted to brigadier general in 1940 and assigned to the Quartermaster Corps, with responsibility for the army's program of camp building. He was appointed assistant chief of staff of the war department in 1941 and commanding general, Army Service Forces, in March, 1942.

OBITUARY

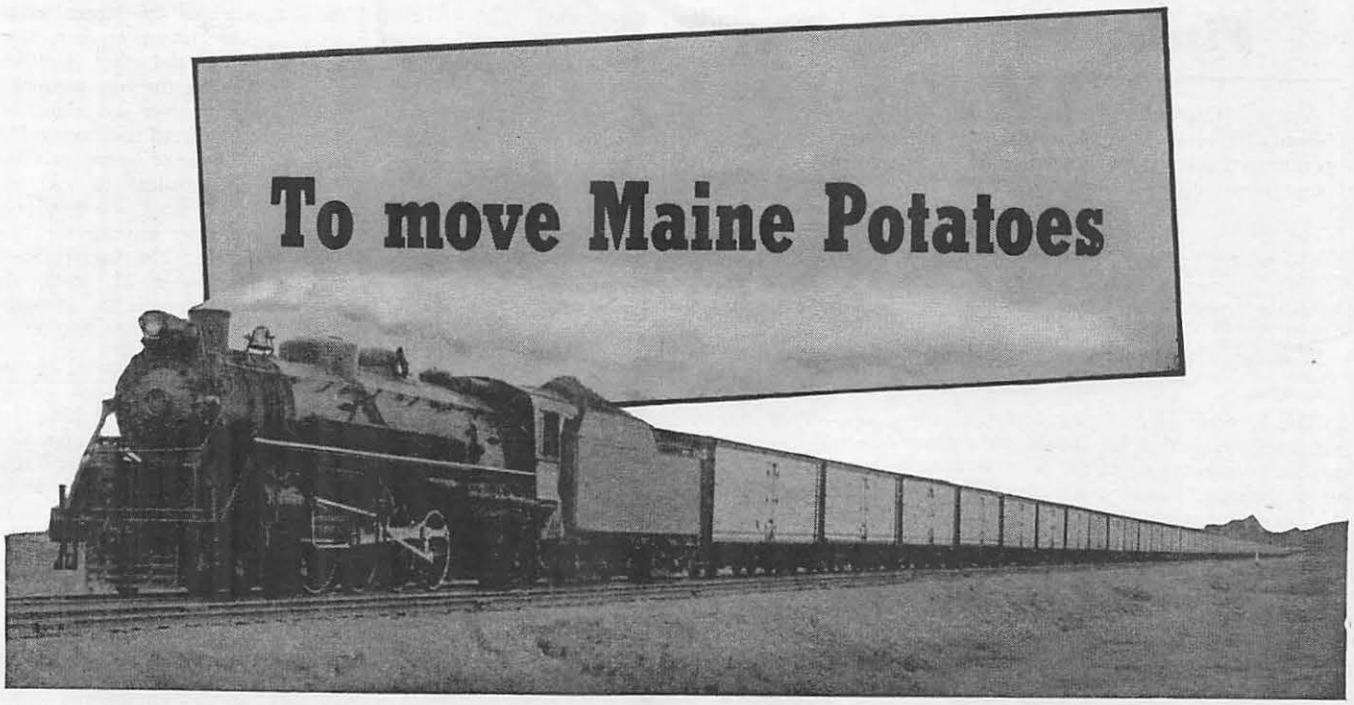
J. Raymond Forney, a railway supply manufacturers' agent with headquarters in Washington, D. C., died on March 24. He was 63 years of age. Mr. Forney was graduated from Holy Cross College. He began his railroad career in the Pittsburgh, Pa., office of the Pennsylvania and for many years was associated with the Ralston Steel Car Company. He had conducted his own business as a manufacturers' agent since 1925. He was vice-president of the Stoker Parts Company of Pittsburgh, and Washington representative of the Pittsburgh Steel Foundry Corporation. He was the nephew of M. N. Forney, who was the author of the Catechism of the Locomotive.

Abandonments

CHICAGO, ROCK ISLAND & PACIFIC.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a segment of line from Brighton, Iowa, to Washington, 12.5 miles, upon completion of an alternate line with easier grades and less curvature.

TEXAS & PACIFIC.—This company has applied to the Interstate Commerce Commission for authority to abandon a part of a branch from Church Point, La., to Crowley, 20 miles.

News Department continued on next left-hand page



Bangor and Aroostook locomotives are equipped with Boosters*

To aid in starting heavy refrigerator car trains of Maine potatoes, and to maintain speed on grades, Bangor & Aroostook locomotives are equipped with The Franklin Locomotive Booster.

Trade Mark Reg. U. S. Pat. Off.

FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

Financial

AKRON, CANTON & YOUNGSTOWN.—*Annual Report.*—A condensation of the operating results for the year 1945, and comparison with 1944, follows:

	1945	Inc. of Dec. Compared With 1944 Amount	%
Operating Revenues	$4,286,005	−$316,765	−6.9
Operating Expenses	3,227,857	+92,166	+2.9
Net Operating Revenues	1,058,148	−408,931	−27.9
Taxes	381,422	−195,182	−33.9
Net Income	245,896	−237,742	−49.2

The decrease in operating revenues was reported occasioned by strikes in rubber and other industries and the discontinuance of shipments of war materials following V-J day. A comparable reduction in operating expenses was not possible because of the necessity for full train service for a period following the war, increased costs of materials and supplies and the continuance of a maintenance program necessary to prevent further deferred maintenance.

In the annual report, H. B. Stewart, Jr., president, said that earnings prospects for 1946 were good, and anticipated that all dividend requirements on the preferred stock would be met. The ability to initiate dividends on the common stock later in the year, he said, will depend more than anything else upon industrial production, wage rates and costs of materials and supplies.

ATCHISON, TOPEKA & SANTA FE.—*Annual Report.*—A condensation of the company's income statement follows:

	1945	1944
Railway Operating Revenues	$528,703,149	$528,080,530
Railway Operating Expenses	404,459,607	303,738,777
Net from Railway Operations	$124,243,542	$224,341,753
Railway Tax Accruals	81,612,242	158,347,230
Net equipment and joint facility rents	*5,547,124	*5,815,596
Other Income	2,132,095	4,955,425
Miscellaneous Deductions	821,247	588,328
Interest on funded debt	8,980,525	10,003,390
Net Income	$29,414,499	$54,542,634

* Red figure.

As is to be noted above, net revenues from railway operations, before taxes, decreased $100,098,211 from 1944 and net after taxes decreased $23,363,223. Accruals for federal income and excess profits taxes were $54,299,659, a decrease of $78,988,907 under the preceding year. The $81,612,242 total of all taxes in 1945 was equal to $1,151 per employee and $33.63 per share of common stock. The drop in common stock earnings from $19.91 in 1944 to $9.56 in 1945 was due principally to greater maintenance expenses and acceleration of amortization of the cost of defense facilities.

During the year outstanding funded debt was reduced $13,087,000 by the payment of equipment trust certificates aggregating $5,110,000 and call for payment at 110 on December 1 of $7,977,000 outstanding in convertible 4 per cent bonds due in 1955 and 1960. By this, the last callable debt of the company is eliminated and there are no maturities prior to 1995 except equipment trust certificates. In the report, F. G. Gurley, president, stated that funded debt has been reduced $103,946,616, or 31 per cent, in the past five years and that interest charges in 1946 will be about $8,600,000, as compared to $13,152,997 in 1940, a reduction of 34.5 per cent.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—*Reorganization Plan.*—This road's reorganization managers have asked the Interstate Commerce Commission for authority to consummate the approved plan for its reorganization by issuing new securities and effecting acquisition of the property by the new company.

CHICAGO & NORTH WESTERN.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to acquire by merger the Escanaba, Iron Mountain & Western, which it now operates under lease, owning all its capital stock and indebtedness. The Escanaba extends 50.33 miles from Escanaba, Mich., to Antoine.

CHICAGO, BURLINGTON & QUINCY.—*Joint Control of Bridge.*—Division 4 of the Interstate Commerce Commission has authorized this company to acquire joint control of the Missouri & Illinois Bridge & Belt, a 2.67-mile line including a bridge crossing the Mississippi river at Alton, Ill. Although the 1,430 shares of Belt stock are held by 10 railroads and an individual, each owning 130 shares, most of these proprietors are interested only as investors, the report noted, as 90 per cent of the use of the property is by the Burlington, which has not been a proprietor but has used the line under a rental agreement. It has arranged to acquire an ownership interest by the purchase of 130 shares and an option to purchase an additional 260 shares, all at $267 per share.

DETROIT, TOLEDO & IRONTON.—*Refunding.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue $9,626,000 of series B 2¾ per cent first mortgage bonds, due in 1976, which have been sold at 100.325 to Shields & Company and others, making the average cost 2.73 per cent annually. The proceeds and other funds are to be applied to the redemption at 107½ of an equal principal amount of series A 4 per cent first mortgage bonds due in 1967. In addition, the division has authorized the company to exchange $1,000,000 of the new bonds for the same principal amount of series A bonds held in its treasury. Total estimated savings from the transaction are $1,165,727.

GREAT NORTHERN.—*Awards Bonds.*—On April 2 the Great Northern awarded $25,000,000 of series R, 2¼ per cent general mortgage bonds maturing January 1, 1961, to Morgan Stanley & Co. and associates at 99.279, a net interest cost to the railroad of less than 2.31 per cent. The bonds were reoffered at 100. (Previous item in *Railway Age* of March 30, page 701.)

LONG ISLAND.—*Annual Report.*—Operating revenues of the Long Island during 1945 increased $50,374 but operating expenses increased $185,635, including $180,602 to cover the unamortized cost of emergency facilities, according to the company's annual report. Freight revenue declined, due to the cessation of hostilities and labor disturbances in some of the larger industries, but the decrease was more than offset by increased passenger and other operating revenues. All taxes for the year amounted to $5,118,962, equal to over 4½ cents for each passenger carried, and consuming 11.4 cents out of every dollar of operating revenue. They were equivalent to 9.31 per cent upon the capital stock, or $4.65 per share. Net income, after meeting all fixed charges, was $857,579. The balance sheet shows that at December 31, 1945, the amount due the Pennsylvania for advances was $6,000,000, a decrease of $1,000,000.

MARYLAND & PENNSYLVANIA.—*Payment of R. F. C. Loan.*—This road has applied to the Interstate Commerce Commission for authority to issue $700,000 of series C 6 per cent first consolidated mortgage bonds, due in 1963, of which $200,000 are to be held in its treasury and $500,000 are to be pledged in connection with a loan of $200,000 from the Mercantile Trust Company of Baltimore, Md., evidenced by 4 per cent notes in that amount, due in 1951. In addition, $100,000 of the road's 4 per cent first mortgage bonds, due in 1951, are to be pledged. The proceeds of the bank loan are to be used to retire a $200,000 loan from the Reconstruction Finance Corporation, due this year. Among securities pledged under the R. F. C. transaction are $700,000 of series B 6 per cent first consolidated mortgage bonds due in 1947, which are to be canceled upon issuance of the series C bonds.

MISSOURI-KANSAS-TEXAS.—*Promissory Notes.*—This company has asked the Interstate Commerce Commission for authority to issue $4,750,000 of promissory notes due in installments to and including 1951, the interest rate to be determined by competitive bidding. The proceeds are to be used to pay a bank loan of that amount, the portion remaining of that obtained from the Central Hanover Bank & Trust Company on 2-year 1¾ per cent notes.

NEW YORK, NEW HAVEN & HARTFORD.—*To Pay Interest.*—On March 29 the U. S. District Court at New Haven, Conn., approved a petition by trustees of the New York, New Haven & Hartford to pay interest charges totaling $9,041,134, including interest payments of $7,918,819 on the first and refunding bonds.

PORT OF PALM BEACH DISTRICT.—*Operation.*—Division 4 of the Interstate Commerce Commission has authorized this organization to continue operation of a 2.15-mile terminal line at Palm Beach, Fla., connecting with the Florida East Coast.

UNION FREIGHT.—*Promissory Note.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $170,000 of 2 per cent serial promissory notes, the proceeds of which are to be used toward the purchase of five 44-ton Diesel-electric switching locomotives from the General Electric Company. The notes will evidence a loan from the New England Trust Company.

WABASH.—*Annual Report.*—In releasing his report for 1945, Norman B. Pitcairn, president of the Wabash, said that the company has made plans for improved equipment and service in the post-war period

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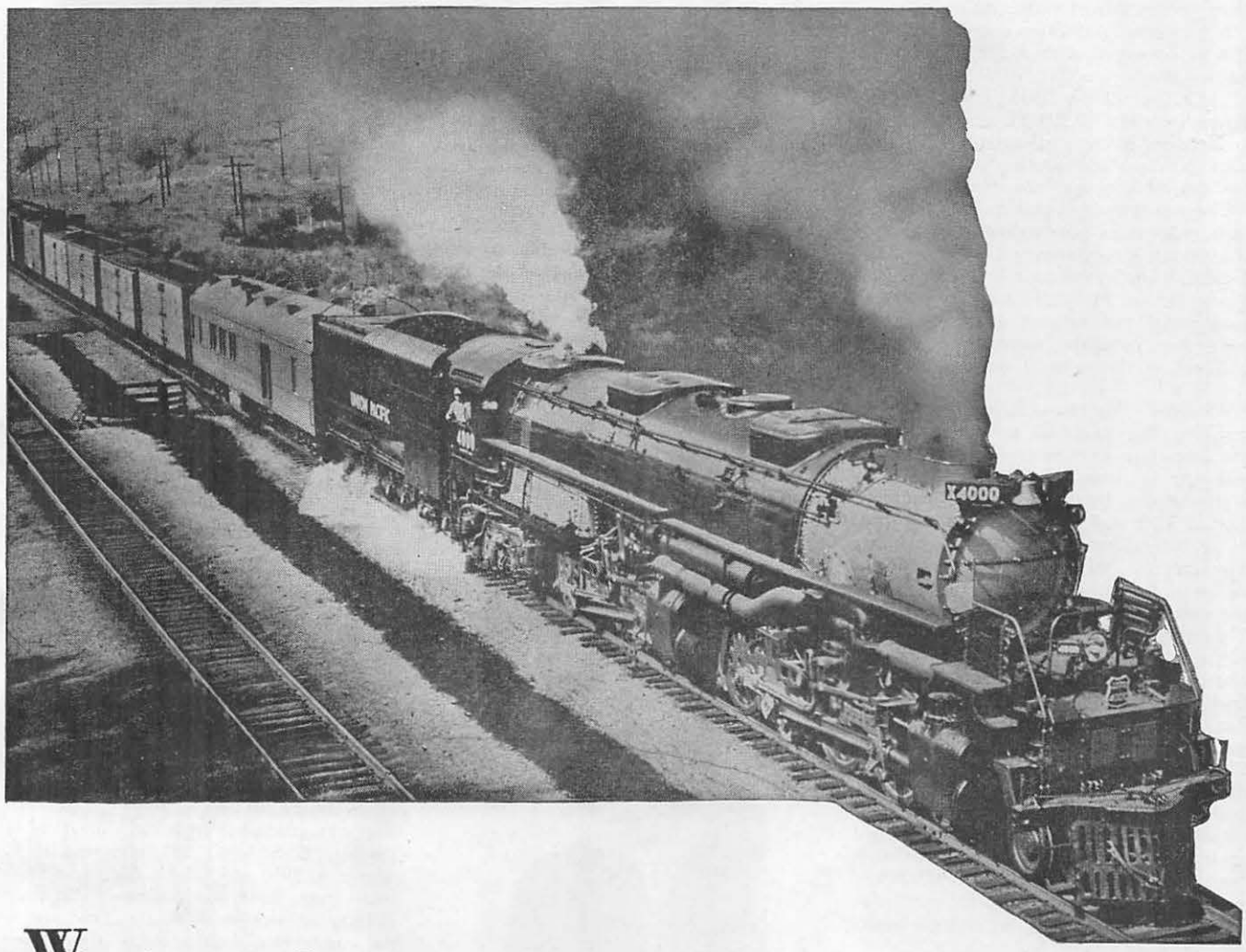
HEAVY TRAFFIC



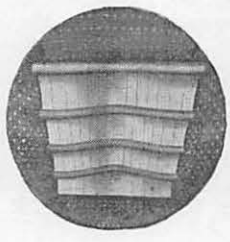
When heavy traffic calls for maximum motive power efficiency, the locomotive must be kept in condition to get full value from every ton of coal burned.

To do so, it is essential to maintain a complete brick arch in the firebox at all times.

For thirty-six years, on all types of locomotives, Security Sectional Arches have been giving long service at low maintenance costs.

needs unrestricted power

HARBISON-WALKER REFRACTORIES CO.
Refractories Specialists



AMERICAN ARCH CO. INC.
60 East 42nd Street, New York 17, N. Y.
Locomotive Combustion Specialists

that will enable it to play its part in providing service of unequaled quality in the territory it serves. He called particular attention to the improvements in safety and operation made in 1945 by the installation of approximately 100 miles of manual block remote control signal system, seven miles of automatic block signals, and 16 miles of centralized traffic control.

Net income in 1945 amounted to $5,966,723, as compared with $6,518,154 in 1944. Gross income was $91,870,507, a decrease of $3,702,005 below 1944. Operating expenses increased $7,299,658, due principally to increases in costs of materials and supplies, in wages and salaries, and in charges for depreciation and amortization.

The report showed that in 1945 the Wabash reduced its outstanding debt by $6,260,000 and since January 1, 1942, by $27,878,461, while in the same four-year period a reduction of $1,482,373 was made in annual rental and interest charges. Sixty-eight new industrial plants were located adjacent to the railroad during the year.

WESTERN PACIFIC. — *Refunding.* — This company has modified an application to the Interstate Commerce Commission for authority to issue $10,000,000 of series B first mortgage bonds, fixing their maturity date in 1981 and leaving the interest rate to be determined by competitive bidding. The proceeds will be employed to retire an equal principal amount of series A 4 per cent first mortgage bonds outstanding. The original application (see *Railway Age* of July 21, 1945, page 121), which contemplated a 3 per cent issue, has not been finally disposed of by the commission, but Examiner F. E. Grutzik in a proposed report (*Railway Age* of August 11, 1945, page 271) has recommended that it be denied on the ground that the road has ample funds available to retire the series A issue without issuing other bonds. In the modified application the company pointed out that it has since called for redemption $5,000,000 of series A 4½ per cent general mortgage bonds, thereby reducing its charges materially.

Average Prices Stocks and Bonds

	April 2	Last week	Last year
Average price of 20 representative railway stocks..	63.27	63.95	49.90
Average price of 20 representative railway bonds..	102.95	102.70	95.92

Dividends Declared

Atchison, Topeka & Santa Fe. — Quarterly, $1.50, payable June 1 to holders of record May 3.

Carolina, Clinchfield & Ohio.—Quarterly, $1.25, payable April 20 to holders of record April 10.

Chicago & Eastern Illinois. — ($2 class A), $1.00, payable April 15 to holders of record April 1.

Dover & Rockaway.—Semi-annually, $3.00, payable April 1 to holders of record March 30.

New York, Chicago & St. Louis.—6% preferred, accumulative, $1.00, payable April 15 to holders of record April 1.

Norwich & Worchester.—8% preferred, quarterly, $2.00, payable April 1 to holders of record March 15.

Philadelphia & Trenton.—Quarterly, $2.50, payable April 10 to holders of record April 1.

Reading.—Quarterly, 25¢, payable May 9 to holders of record April 11.

Vermont & Massachusetts. — Semi-annually, $3.00, payable April 8 to holders of record April 1.

Western Pacific.—common, 75¢; $5 preferred, $1.25, both quarterly, both payable May 15, August 15, November 15, and February 15, 1947, to holders of record May 1, August 1, November 1, and February 1, 1947, respectively.

Railway Officers

EXECUTIVE

F. H. Moore, vice-president of the Kansas City Southern, at Kansas City, Mo., has retired after more than 36 years of service.

Clarence R. Tucker, acting general manager, Coast Lines, of the Atchison, Topeka & Santa Fe, at Los Angeles, Cal., has been appointed assistant vice-president, with headquarters at Chicago.

M. M. Cronk, whose election to vice-president and general manager of the Pere Marquette, with headquarters at Detroit, Mich., was reported in the *Railway Age* of March 30, was born at Howard City, Mich., on November 4, 1894, and attended business college. He entered railway service in 1911 as a telegrapher for the Grand Rapids & Indiana (now part of the Pennsylvania) at Howard City, Mich., while still attending high school. From 1912 to 1915 he served as a telegrapher on the Chicago, Burlington & Quincy, the Union Pacific,

M. M. Cronk

the Canadian Pacific and the Michigan Central. Mr. Cronk went with the Pere Marquette as a telegrapher in the spring of 1915, and in the summer of 1916 he was advanced to car distributor at Grand Rapids, Mich. In the fall of 1917 he was promoted to trainmaster of the Chicago terminal and on May 1, 1923, he was advanced to assistant superintendent of the Chicago-Petosky division, with headquarters at Grand Rapids. On January 1, 1941, Mr. Cronk was promoted to superintendent of that division, with the same headquarters, and in June, 1942, he was advanced to general superintendent of the system, with headquarters at Detroit. In February, 1943, Mr. Cronk was further advanced to general manager, the position he held at the time of his election to the vice-presidency.

Guy N. Curley, whose appointment as assistant to the vice-president and general manager of the Canadian Pacific at Toronto, Ont., was announced in the *Railway Age* of March 16, entered C. P. R. service in 1916 as a stenographer in the general manager's office at Montreal, Que., becoming clerk-accountant at Farnham, Que., in January, 1918, leaving for military service with an engineering battalion in April of that year. He returned in November, 1918,

Guy N. Curley

and served in various clerical positions at Farnham and Montreal until 1937, when he was appointed traveling car service agent, then advanced to acting assistant superintendent. Mr. Curley held posts as assistant superintendent at Toronto and at Brownsville Junction, Me., from 1940 until 1944, when he was appointed superintendent of the Farnham division, the post he maintained until his recent advancement.

George J. Ray, whose retirement as vice-president of operations of the Delaware, Lackawanna & Western under that company's pension rules was announced in the *Railway Age* of March 30, was born at Metamora, Ill., on March 24, 1876. Mr. Ray was graduated from the University of Illinois (B. S. 1898) and received a C. E. degree in 1910 and D. Sc. degree in 1916, both from Lafayette College. Entering railway service in 1898 as a rodman in the engineering department of the Illinois

George J. Ray

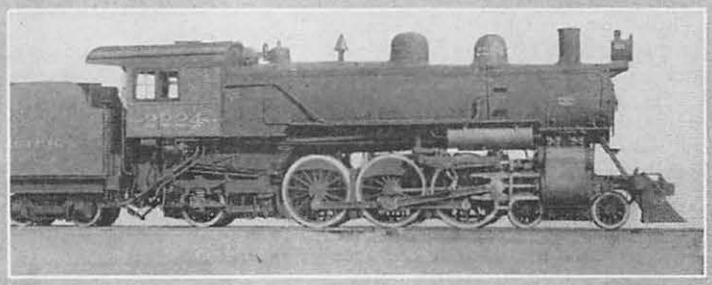
Central, he subsequently transferred to the maintenance-of-way department as track supervisor, later becoming a roadmaster of the I. C. Mr. Ray was first employed by the Lackawanna in 1903 as division engineer at Scranton, Pa., and in 1909, he was promoted to chief engineer at Hoboken,

News Department continued on next left-hand page

The *Development* of the Fire-tube Superheater has kept pace with the remarkable advance of the Steam Locomotive during the past 25 years

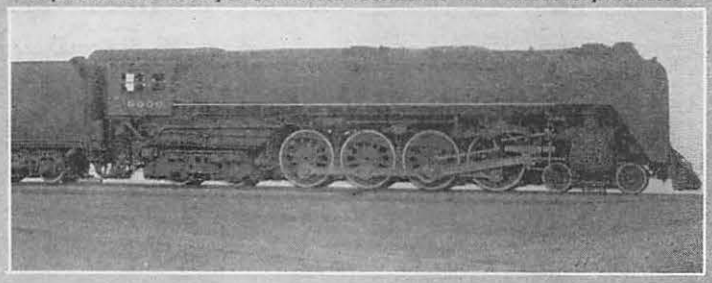
KEEP ABREAST OF SUPERHEATER DEVELOPMENT WITH *Elesco*

1910



1946

Representative example of modern locomotive with Elesco Superheater



THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S Michigan Ave., CHICAGO
Montreal, Canada, THE SUPERHEATER COMPANY, LTD.

Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • American Throttles

N. J. During federal control of the railroads in World War I, Mr. Ray was granted a leave of absence by the Lackawanna to serve as engineering assistant to the regional director of the railroad administration at New York. He returned to the D. L. & W. as chief engineer when federal control was ended and continued in that capacity until the end of 1933. While serving as chief engineer, Mr. Ray had charge of several notable engineering projects, one of which, the low-grade cut-off across northern New Jersey, which included the Pequest fill, largest railroad embankment in the world; and another project, the Lackawanna's cut-off between Clark's Summit, Pa., and Halstead, west of Scranton, included the construction of Tunkhannock viaduct, the world's largest concrete railroad bridge, 2,375 feet long, and 240 feet high, these among many other improvements completed by the Lackawanna during this period. Mr. Ray became vice-president of the D. L. & W. on January 1, 1934. A past-president of the American Railway Engineering Association, he is a former director of the American Society of Civil Engineers.

Edgar M. Whanger, whose promotion to assistant vice-president and assistant to the president of the Pere Marquette, with headquarters at Detroit, Mich., was reported in the *Railway Age* of March 30,

Edgar M. Whanger

was born on August 29, 1899, at Fort Spring, W. Va., and obtained his college education at Washington and Lee University, Lexington, Va., being graduated in 1919. He first entered railway service in March 4, 1912, with the Chesapeake & Ohio and served with that company intermittently while attending school, as a messenger, timekeeper and accountant in the transportation, mechanical and stores department. In July, 1921, he became a machinist apprentice, in which capacity he served at Hinton, W. Va., and Clifton Forge, Va., until September, 1925, when he became a machinist at Huntington, W. Va. In the following month he was appointed mechanical inspector of locomotives and other equipment on the Hocking Valley (part of the C. & O.) at Columbus, Ohio. In September, 1929, Mr. Whanger was assigned to special work for the C. & O., the H. V. and the P. M., with headquarters at Cleveland, Ohio, remaining in this capacity until February 1, 1930, when he was named special representative in the office of the vice-president, maintenance and operation, of the P. M. at Detroit. He was appointed assistant to the vice-president in May, 1937, and in February, 1943, he was promoted to assistant to the president, the position he held at the time of his new appointment.

The office of **John A. Appleton,** whose promotion to assistant vice-president—operation, of the Pennsylvania at Philadelphia, Pa., was announced correctly in the *Railway Age* of March 16, was inadvertantly noted as that of vice-president in connection with the account of Mr. Appleton's career which appeared in the March 30 issue.

FINANCIAL, LEGAL AND ACCOUNTING

J. L. Hobold has been appointed cashier on the St. Louis Southwestern, with headquarters at St. Louis, Mo., succeeding **H. C. Ulrich,** deceased.

F. W. Stetekluh, assistant general auditor on the Northern Pacific, at St. Paul, Minn., has been appointed general auditor, with the same headquarters, succeeding **L. A. Behler,** deceased.

Roy P. Cosper, a member of the legal department of the St. Louis Southwestern, at St. Louis, Mo., has been promoted to general attorney, with the same headquarters, succeeding **Bascom F. Batts,** who has retired because of ill health. **Judge Robert W. McElhinney,** general attorney, has resigned for the purpose of entering the general practice of law.

OPERATING

Perry M. Shoemaker, whose appointment as general manager in charge of operations of the Delaware, Lackawanna & Western at New York, was announced in the March 30 issue of *Railway Age,* was born on July 15, 1906, at Elmira, N. Y., and was graduated from the University

Perry M. Shoemaker

of Michigan (B. S. in engineering, 1928) and from Yale University (Strathcona Fellowship, M. S., 1928). He began his railway career as a track laborer during the summers of 1926 and 1927 for the Pennsylvania and in the summer of 1928 as a dynamometer assistant for the Erie. From 1929 to 1932 he was employed by the Erie as station laborer, freight checker, terminal yardmaster and general yardmaster, then in 1934, became superintendent of freight transportation of the New York, New Haven & Hartford. Mr. Shoemaker went with the D. L. & W. in 1941 as transportation assistant, reporting to the president, and later served as superintendent of the Morris and Essex division. On January 1, 1943, he was advanced to general superintendent, which post he maintained until his promotion on April 1.

A. E. Stoddard, superintendent of the Kansas division of the Union Pacific, with headquarters at Kansas City, Mo., has been appointed assistant general manager of the Eastern district, with headquarters at Omaha, Neb., a newly-created position. **J. E. Mulick,** assistant superintendent of the first and second Nebraska subdivisions and branches, with headquarters at Omaha, has been appointed superintendent of the Kansas division, with headquarters at Kansas City, succeeding Mr. Stoddard.

Leonard R. Bangs, whose appointment as superintendent of the Trenton division of the Canadian Pacific, with headquarters at Toronto, Ont., was announced in the March 16 issue of *Railway Age,* was born

Leonard R. Bangs

at Mattawa, Ont., on July 14, 1900, and entered the service of the C. P. R. in 1918 as an operator, which post he held at various points in the Algoma district until 1928, when he became relief dispatcher, Sudbury division. From 1932 until 1941, he served as swing operator and dispatcher at Cartier, Ont., and Sudbury, where he became night chief dispatcher in 1941. Mr. Bangs was appointed acting assistant superintendent at North Bay, Ont., in 1942, and assistant superintendent at Sudbury in 1943, transferring to Smiths Falls, Ont., in 1945. He maintained the latter post until his recent advancement to superintendent.

Earle E. McCarty, general manager, Coast Lines, of the Atchison, Topeka & Santa Fe, who has been on leave of absence to serve as director of the railway transport department of the Office of Defense Transportation, at Washington, D. C., has returned to duty at Los Angeles, Cal. **A. B. Enderle,** superintendent of the Albuquerque division at Winslow, Ariz., has

News Department continued on second left-hand page

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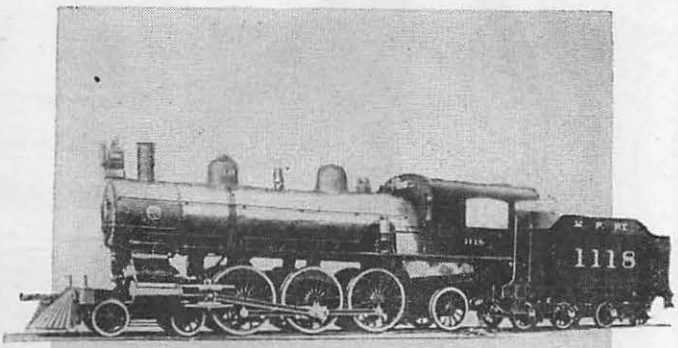

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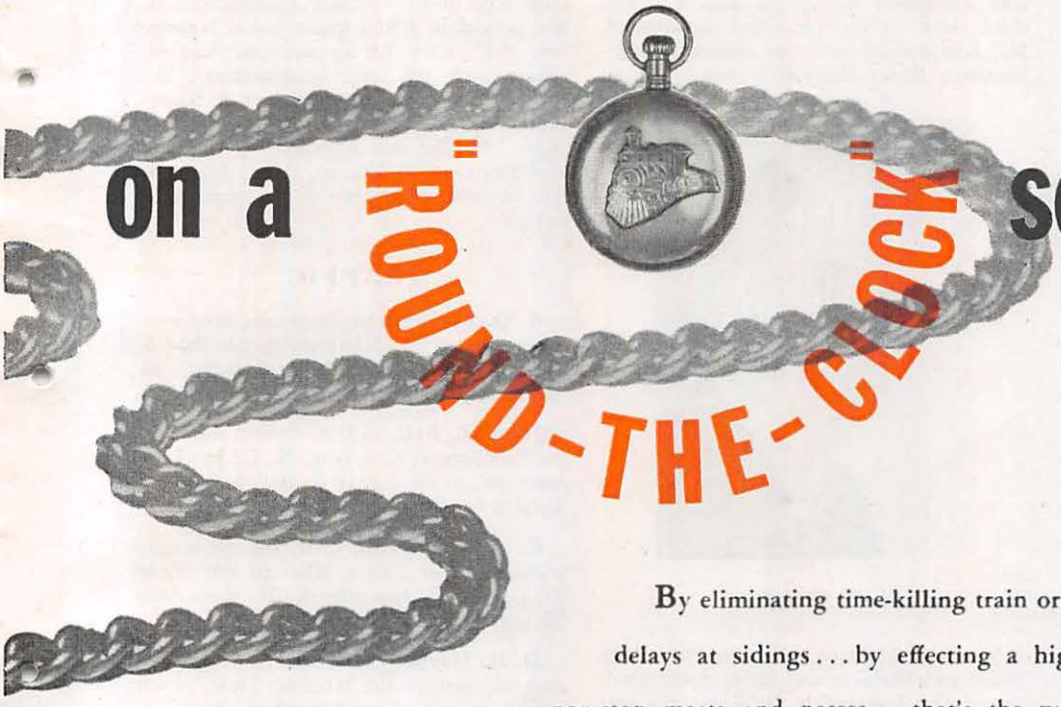

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been transferred to the Los Angeles division, with headquarters at San Bernardino, Cal., succeeding **J. W. Murphy,** who becomes superintendent at Needles, Cal., where he replaces **A. J. Smith,** who succeeds Mr. Enderle as superintendent at Winslow.

Claude D. Merrill, superintendent of the Philadelphia division of the Pennsylvania, with headquarters at Harrisburg, Pa., has been appointed assistant to the general manager, at St. Louis, Mo., a newly-created position. **Morton S. Smith,** superintendent of freight transportation, at Chicago, becomes superintendent of the Philadelphia division, replacing Mr. Merrill. **Allen J. Greenough,** superintendent of the Wilkes-Barre division, at Sunbury, Pa., succeeds Mr. Smith as superintendent of freight transportation, at Chicago; **E. P. Adams,** passenger trainmaster, at Altoona, Pa., succeeds Mr. Greenough as superintendent of the Wilkes-Barre division at Sunbury. A photo of Mr. Smith and a sketch of his career appeared in the *Railway Age* of October 21, 1944.

R. C. Johnston, whose appointment as assistant general manager of the Canadian National, with jurisdiction over the central region and headquarters at Toronto, Ont., was announced in the March 16 *Railway*

R. C. Johnston

Age, entered railroading as station assistant for the Grand Trunk at Novar, Ont., in 1906, in which capacity he transferred to Staynor, Ont., in 1907, and to Thornbury, Ont., in 1908. He then served as telegraph operator at Beeton, Ont., Orillia, Huntsville, and Hawkestone, and as relieving station agent at various stations. In 1912 he became agent at Campbellford, Ont., and in 1919 went to Montreal, Que., as division agent, where he advanced to superintendent of terminals in 1926. Mr. Johnston was named general superintendent of the Montreal district at Montreal in 1939, and later transferred to the Southern Ontario district at Toronto, which post he held until his recent appointment.

J. R. Kimpton, whose appointment as general superintendent of the Canadian Pacific, Quebec district, Montreal, Que., was announced in the *Railway Age* of March 16, entered C. P. R. service as a clerk in the office of the superintendent at Montreal, serving subsequently as stenographer, general clerk, and assistant accountant, transferring to the office of the general manager there in 1923. In 1926 he was appointed statistician and in 1931, chief clerk in the personnel department. Mr. Kimpton advanced to assistant superintendent, Bruce division, Toronto, Ont., in

J. R. Kimpton

1937, then to operating superintendent, Woodstock division, and later, superintendent of the Laurentian division. He was promoted to assistant manager, department of personnel at Montreal in 1943, and again advanced in 1945 to assistant to the vice-president, with headquarters at Toronto, the post he relinquished to become general superintendent.

Patrick T. McCarthy has been appointed superintendent of the Oregon division of the Union Pacific, with headquarters at Albina, Ore.

W. H. DeButts, whose retirement as superintendent of the Southern's Washington division, with headquarters at Alexandria, Va., was announced in the *Railway Age* of March 16, was born at Delaplane, Va., on October 23, 1899, and attended the University of Virginia. He began his career with the Southern in 1922 as a laborer on the Washington division, then served from 1923 to 1926 as special apprentice at the Baldwin Locomotive Works, and later was employed for six months in the Altoona (Pa.) shops of the Pennsylvania. He returned to the Southern in 1927 as an engineer of train control, then was appointed trainmaster at Atlanta, Ga., in 1935. Mr. DeButts advanced to superintendent in 1937, with headquarters at St. Johns River Terminal, Jacksonville, Fla., and transferred in 1938 to the Georgia Southern & Florida (part of the Southern) at Macon, Ga., then in 1940 again transferred to the position from which he retired at his own request on March 15.

Bernard S. Sines, whose promotion to superintendent of the Salt Lake division of the Southern Pacific, with headquarters at Ogden, Utah, was reported in the *Railway Age* of March 23, was born at Detroit, Mich., on August 8, 1901, and received his higher education at Cornell University. He entered railroad service in July, 1922, with the Illinois Central, at Chicago, and in January, 1925, he became assistant engineer, maintenance of way, on the Southern Pacific, at El Paso, Tex. In January, 1933, he was appointed assistant engineer, executive department, at San Francisco, Cal., and served in that capacity until November, 1937, when he became executive assistant, with the same headquarters. Mr. Sines was appointed trainmaster at Sacramento, Cal., in February, 1944, and in May, 1944, he was advanced to assistant superintendent at Tucson, Ariz., the position he held at the time of his recent promotion.

TRAFFIC

A. O. Plunkett has been appointed general agent on the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Grand Rapids, Mich.

John H. Bell, district freight agent of the Southern at Charlotte, N. C., has been promoted to the newly-created position of division freight agent there.

C. K. Bothwell, assistant passenger traffic manager on the Missouri Pacific, at St. Louis, Mo., has retired after more than 50 years of railroad service.

D. H. Haynie has been appointed acting general agent on the Missouri Pacific, with headquarters at Cape Girardeau, Mo., succeeding **J. C. Tinsley,** temporarily assigned to other duties.

D. R. Ostrander, acting general agent on the Great Northern, at San Francisco, Cal., has been appointed general agent with the same headquarters, succeeding **G. A. Sorrell,** deceased.

W. G. Young, manager of the reservation and information bureau of the Chicago, Rock Island & Pacific, at Chicago, has been appointed manager of travel and tour service, with the same headquarters.

Nicholas A. Hocker, secretary to assistant vice-president—traffic, of the Southern at Washington, D. C., has been promoted to the newly-created position of district freight agent at Palatka, Fla.

J. A. McRoberts has been appointed general agent on the Chicago Great Western, with headquarters at Dallas, Tex., succeeding **G. W. Sanberg,** who has resigned.

G. H. Gaiennie, formerly a representative of the St. Louis-San Francisco in the Western Military Bureau, at Ft. Sill, Okla., and recently discharged from the Navy, has returned to the Frisco and has been promoted to general agent, passenger department, with headquarters at Chicago.

Paul J. Cramer, general agent on the Illinois Central, at Detroit, Mich., has been appointed general traffic agent, with the same headquarters, a newly-created position. **Fred Heimlicher, Jr.,** commercial agent at Washington, D. C., has been appointed general agent at Detroit.

C. C. Gardner, assistant general passenger agent on the Chicago, Rock Island & Pacific, has been appointed assistant to the passenger traffic manager, with headquarters as before at Des Moines, Iowa,

News Department continued on next left-hand page

SWITCH STANDS for Main Line Use

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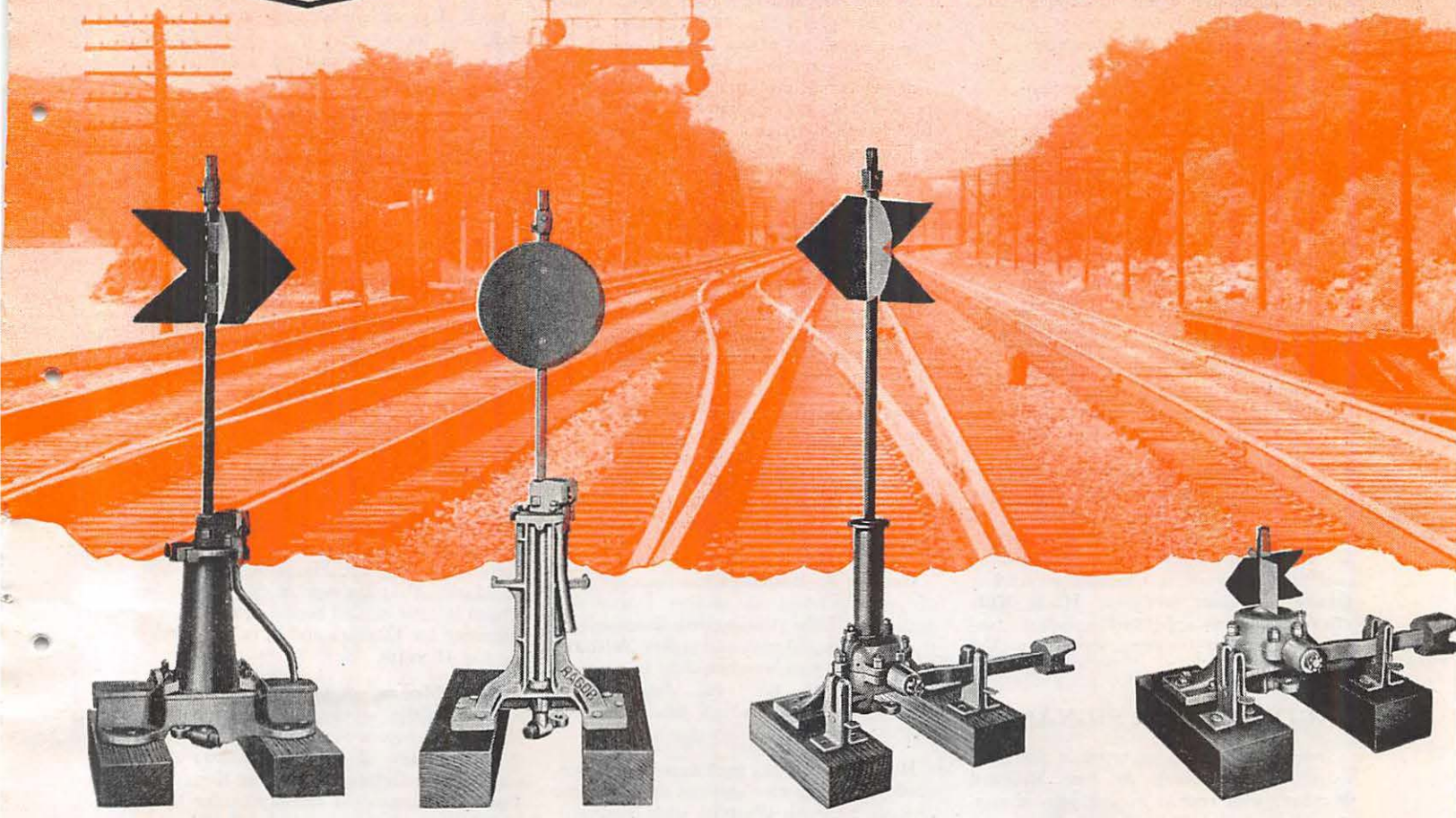

FIG. 17-C (Pat.)
RACOR AUTOMATIC SAFETY SWITCH STAND

FIG. 112-D
RACOR COLUMN SWITCH STAND

FIG. 36-H (Pat.)
RACOR PARALLEL THROW GEARLESS SWITCH STAND

FIG. 36-D (Pat.)
RACOR PARALLEL THROW GEARLESS SWITCH STAND

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a newly-created position. **W. H. Weik,** district passenger agent at Peoria, Ill., has been promoted to assistant general passenger agent at Des Moines, succeeding Mr. Gardner. **T. L. Readdy,** passenger agent at Kansas City, Mo., succeeds Mr. Weik as district passenger agent at Peoria. **C. O. Huff,** general agent at El Paso, Tex., has been transferred to Los Angeles, Cal., where he succeeds **H. N. Sears,** who has retired after 39 years of service. **R. J. White,** passenger agent at Kansas City, has been appointed general agent at El Paso, replacing Mr. Huff. **C. H. Rohrer** has been appointed district freight and passenger agent at Atlanta, Ga. **H. W. Clutter,** city passenger agent at Amarillo, Tex., has been promoted to district passenger agent, with the same headquarters. **D. L. Chambers,** district passenger agent, has been advanced to general agent, with headquarters as before at Phoenix, Ariz.

T. E. Nerland, general agent, passenger department, on the New York Central, at Detroit, Mich., has been appointed assistant general passenger agent at Chicago. **H. A. Coughenour** has been appointed coal freight agent at Chicago, succeeding **George Masson,** deceased. **H. B. Kutcher** has been appointed assistant coal freight agent at Chicago, succeeding Mr. Coughenour.

ENGINEERING & SIGNALING

It was erroneously reported in the *Railway Age* of March 30 that **Richard Mather,** who retired as engineer of construction of the Baltimore & Ohio, was born in 1887. The correct year of birth is 1877.

The Southern has announced that the titles of roadmaster and assistant roadmaster on all divisions and lines comprising Southern Railway System have been changed to division engineer and assistant division engineer, respectively, and the positions of roadmaster and assistant roadmaster abolished.

Captain J. E. Eisemann, formerly with the engineering department of the Atchison, Topeka & Santa Fe at Fresno, Cal., and San Francisco, and, since the completion of the mission of the 2nd Military Railway Service, chief engineer all rail lines in the American Zone of occupation, has been promoted to major, effective January 11, 1946. Major Eisemann was recently awarded the Army Commendation Ribbon for Meritorious Service.

A. R. Kyle, whose retirement as superintendent of telegraph and signals of the Virginian, with headquarters at Princeton, W. Va., was announced in the *Railway Age* of March 30, was born at Manchester, England, on March 12, 1881, was educated at public and technical schools, and served as engineer lieutenant-commander in the British navy during World War I. He came to the United States in 1923, and entered railroad service on June 16 of that year as superintendent of reclamation on the Virginian. In December, 1925, he became assistant to the electrical engineer, and served in that capacity until April, 1934, when he was appointed assistant to the vice-president and general manager. In May, 1935, Mr. Kyle was made assistant to the president. In February, 1936, he was appointed acting superintendent of the Norfolk division, and superintendent in September of the same year. In February, 1941, he was appointed superintendent of telegraph and signals, with headquarters at Princeton, W. Va., the position he held at the time of his retirement.

MECHANICAL

L. E. Dix, fuel supervisor on the Texas & Pacific, at Dallas, Tex., has been appointed acting mechanical superintendent, with the same headquarters, relieving **J. J. Prendergast,** who has been granted a leave of absence.

A. G. Gebhard, master mechanic, Diesel and electric equipment, on the Illinois Central, has been appointed general master mechanic, with headquarters as before at Chicago. The position of master mechanic, Diesel and electric equipment, has been abolished.

George A. Benedict has been appointed superintendent of motive power and equipment of the Alaska, with headquarters at Anchorage, Alaska, succeeding **William L. Kinsell,** who becomes chief mechanical engineer, with the same headquarters. **Murray T. Hughes** has been appointed master mechanic, also at Anchorage.

H. H. Magill has been appointed superintendent, locomotive and car shops, on the Chicago & North Western, with headquarters at Chicago. **H. A. Grange** has been appointed assistant superintendent, locomotive shops, at Chicago. **H. H. Thomas** has been appointed master mechanic, with headquarters at Green Bay, Wis., succeeding **W. W. Hoffman,** who has retired.

Frank K. Mitchell, assistant to general superintendent, motive power and rolling stock of the New York Central, has been appointed general superintendent, motive power and rolling stock, with headquarters as before at New York, succeeding the late **W. H. Flynn,** whose photograph appeared with a biographical account of his railway career in the *Railway Age* of March 23.

PURCHASES AND STORES

George L. Mitchell, assistant purchasing agent of the Atlantic Coast Line, has been appointed purchasing agent, with headquarters as before at Wilmington, N. C., succeeding **F. H. Fechtig,** whose biography and photograph appeared in the March 30 issue of *Railway Age* in connection with his retirement on March 31. Other new appointments in the purchasing department of the A. C. L., all at Wilmington, include: **J. U. King,** general storekeeper, and **L. C. Walsh,** assistant chief clerk, have both been named assistant purchasing agents. **N. V. Oldenbuttel,** assistant general storekeeper of the Southern division (A. C. L.) at Waycross, Ga., succeeds Mr. King as general storekeeper. **L. F. Duvall,** assistant general storekeeper in charge of reclamation, has been advanced to supervisor of reclamation.

SPECIAL

R. F. Byron has been appointed chemurgic development agent on the Great Northern, with headquarters at St. Paul, Minn.

OBITUARY

Charles Sutherland, assistant general solicitor on the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago, died in a hospital in that city on March 30.

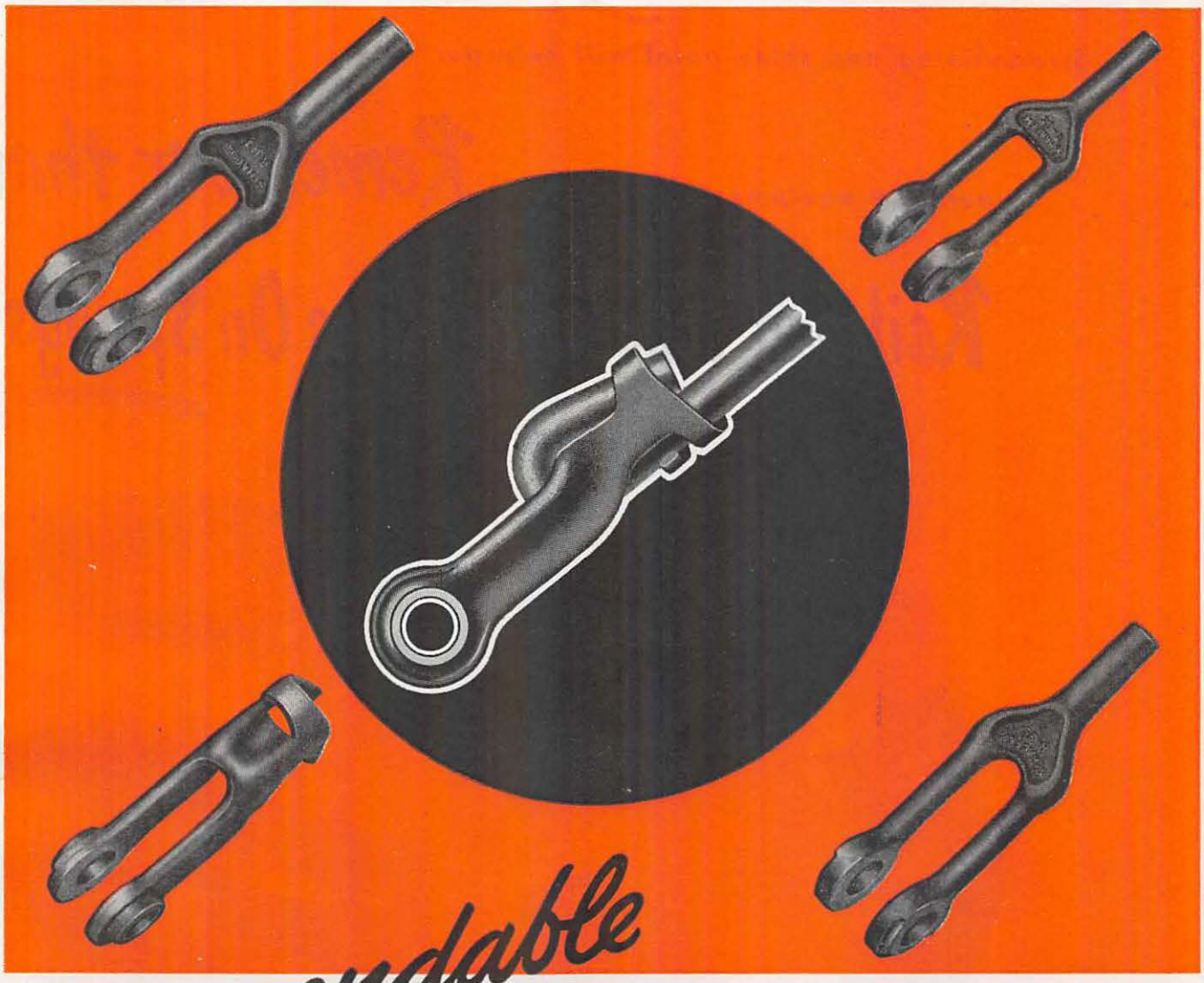
Angus L. Wynn, general claim agent of the Chicago & North Western and the Chicago, St. Paul, Minneapolis & Omaha, with headquarters at Chicago, died suddenly in that city on April 1.

Francis L. McCaffery, who retired on July 31, 1945, as general auditor of the Southern Pacific, at San Francisco, Cal., died at his home in Orinda, Cal., on March 22.

Walter Lee Halliday, retired assistant superintendent of the New York, New Haven & Hartford at Hartford, Conn., died on March 20 at the age of 62. When he retired in 1944 he had been assistant superintendent for 17 years and in railway service for 44 years.

N. V. Moore, whose death on December 5, 1945, while serving as superintendent Hayne car shop of the Southern was noted in the January 12 issue of *Railway Age,* was born on October 2, 1904, at Knoxville, Tenn., and began his railway career there in 1923 as a machinist for the Southern at Coster shop, later transferring to the Hayne car shop at Spartenburg, S. C. He was advanced successively to machinist supervisor, Columbia, S. C., in 1937, assistant foreman engine house at Columbia in 1939, and then general foreman, Spencer, N. C., in 1942. Mr. Moore was appointed superintendent, roadway shop, at Charlotte, N. C., in 1942, from which post he was promoted to the superintendency of the Hayne car shop at Spartenburg.

Robert Willis Scott, general superintendent of the Quebec district of the Canadian Pacific, with headquarters at Montreal, Que., whose death on February 16 was reported in the March 16 issue of *Railway Age,* was born on October 26, 1883, at Toronto, Ont. He entered railway service at the age of 16 as a car checker at Toronto Junction, Ont., for the C. P. R., and advanced to clerk and chief clerk in the superintendent's office, then became agent, clerk in the general superintendent's office at Toronto, and train and station inspector, successively. In 1914, Mr. Scott went to Montreal, where he held clerical posts until December, 1915, when he was appointed assistant superintendent at Sudbury, Ont., then transferred successively to Trenton, Ont., to the Ontario district, and to Montreal terminals. In 1918 he was promoted to superintendent of the Trenton division, then superintendent at Toronto, and in 1919 superintendent of Toronto terminals. Still as superintendent, he went to the Bruce division in 1929, and to the Montreal terminals in 1932. Mr. Scott was appointed general superintendent, the post he held at the time of his death, in 1942.



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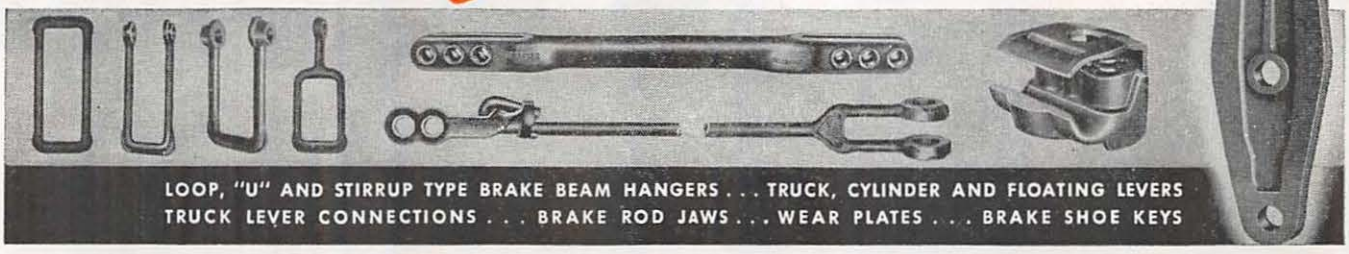

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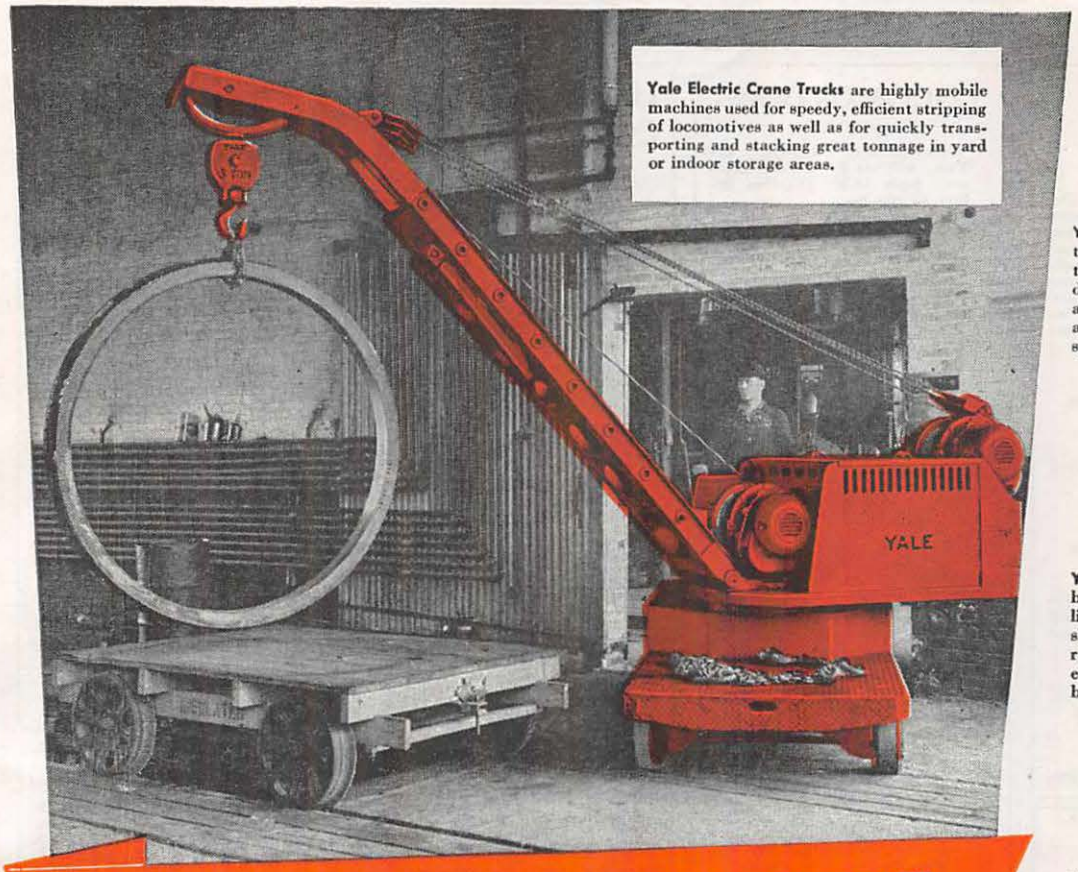

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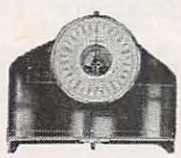

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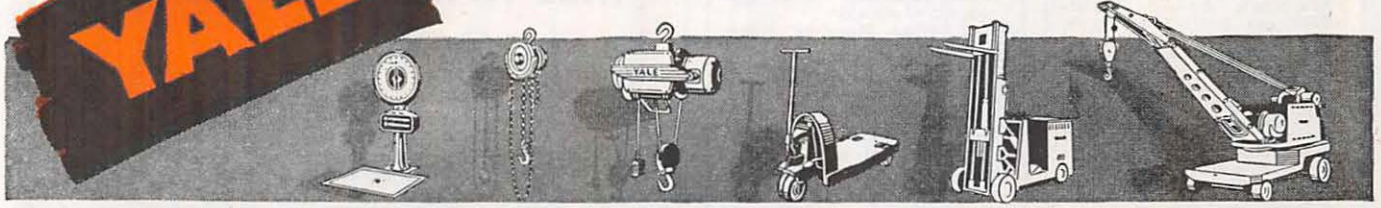

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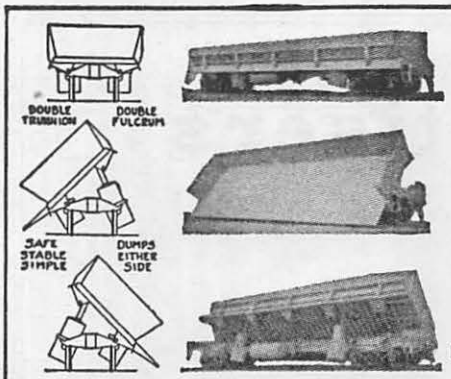

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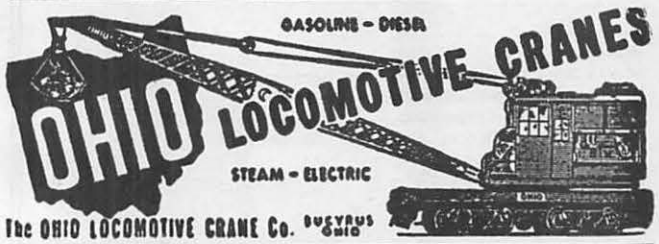

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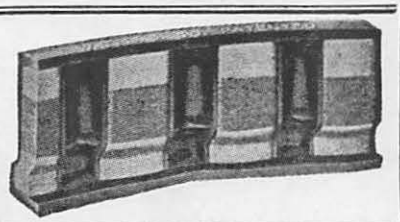

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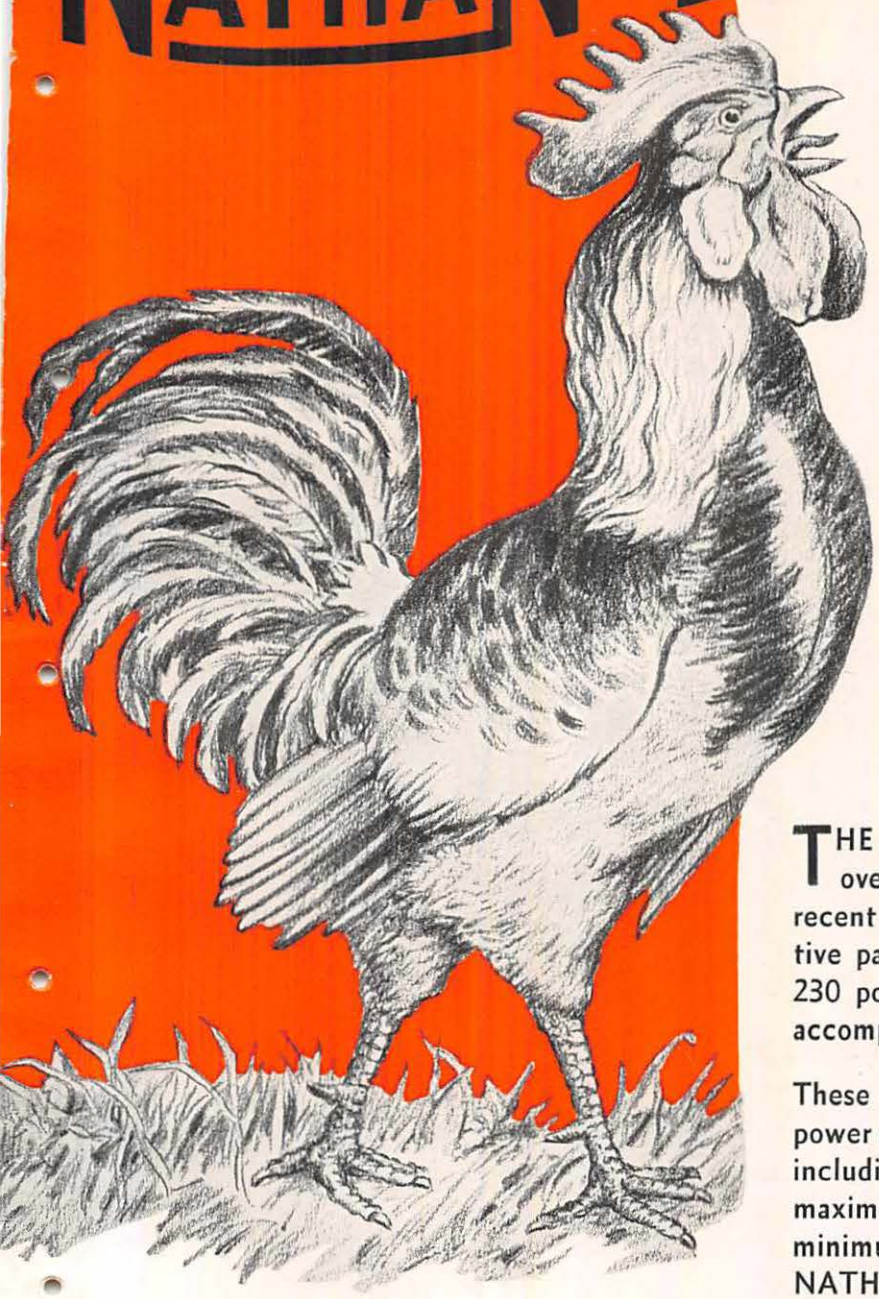

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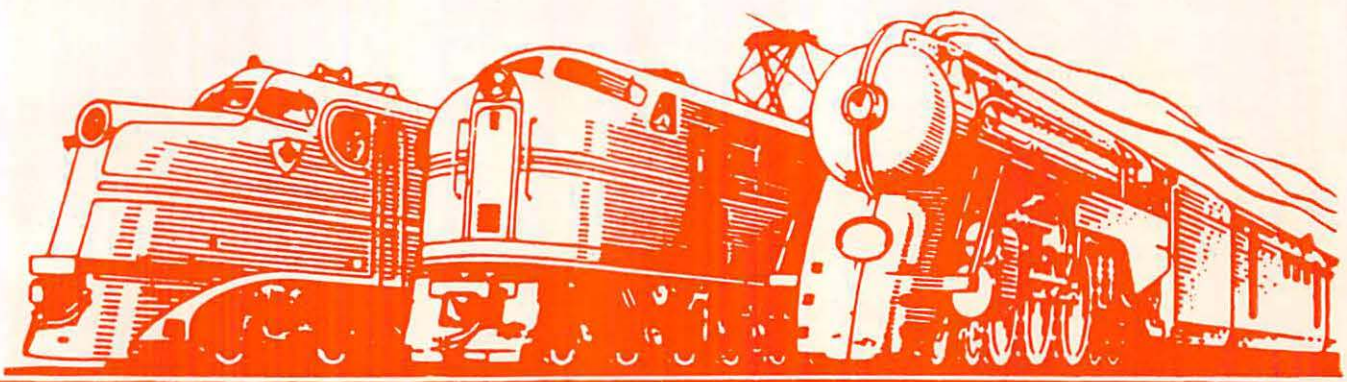

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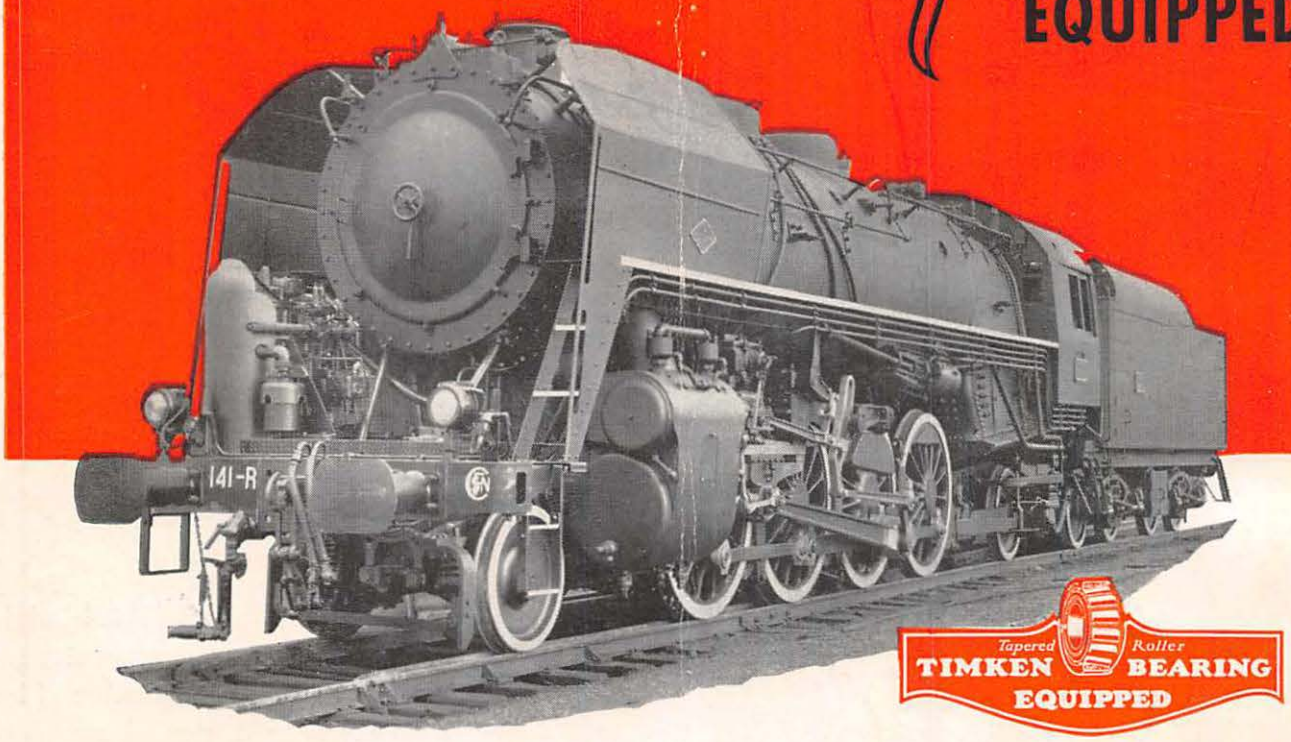
1340 LOCOMOTIVES { TIMKEN BEARING EQUIPPED



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